CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 3 TO
CEASE AND DESIST ORDER NO. 96-52

INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. The International Boundary and Water Commission (IBWC) continues to discharge inadequately treated wastewater from the International Wastewater Treatment Plant (IWTP) to the Pacific Ocean through the South Bay Ocean Outfall in violation of waste discharge requirements contained in Order No. 96-50 and in violation of Section 301 of the federal Clean Water Act (CWA, 33 USC 1311). Violations of waste discharge requirements contained in Order No. 96-50 include routine or recurring exceedence of effluent limits for total suspended solids (TSS), 5-day biochemical oxygen demand (BOD5), acute toxicity, chronic toxicity, ammonia, and total chlorinated dibenzodioxins and chlorinated dibenzofurans (TCDD equivalents) as described in more detail in findings 5 through 9, below.

2. Cease and Desist Order No. 96-52 requires the IBWC to cease and desist from such violations by December 31, 2000, according to a time schedule which includes intermediate milestones that have been extended twice by Addenda Nos. 1 and 2 to Cease and Desist Order No. 96-52; the December 31, 2000 deadline has not been extended. In addition Cease and Desist Order No. 96-52 contains interim effluent limits applicable to existing treatment facilities at the IWTP.

3. The IBWC failed to achieve critical intermediate milestones for compliance with the extended time schedule:

    a. IBWC failed to adopt a Record of Decision (ROD) setting forth its selected alternative for secondary treatment by May 1, 1999.

    b. IBWC has failed and continues to fail to complete design and specifications for the selected secondary treatment alternative with construction bid documents for construction of secondary treatment facilities by August 1, 1999.

4. The IBWC will not be able to complete construction of facilities capable of providing secondary treatment for wastewater from the IWTP by December 3 1, 2000, the deadline set by Cease and Desist Order No. 96-52. Therefore IBWC threatens to continue to discharge inadequately treated wastewater that will continue to exceed effluent limits for TSS, CBOD5, acute toxicity, chronic toxicity, and ammonia after December 31, 2000, in violation of the waste discharge requirements in Order No. 96-50, the requirements of Section 301 of the federal Clean Water Act, and the requirements of Cease and Desist Order No. 96-52.

5. The discharge from the IWTP has continually violated the limits for TSS in Order No. 96-50. These limits include percent removal, maximum at any time, weekly average, and monthly average. These violations occurred every month since discharge began in January 1999; without secondary treatment these violations will continue.

6. The discharge from the IWTP has continually violated the limits for CBODS in Order No. 96-50. These limits include percent removal, maximum at any time, weekly average, and monthly average. The percent removal violation occurred every month since February 1999; the other violations occurred every month since discharge began in January 1999; without secondary treatment these violations will continue.

7. The discharge from the IWTP has continually violated the limits for acute toxicity in Order No. 96-50. These limits include maximum at any time, 7-day average, and 30-day average. These violations occurred every month since discharge began in January 1999; without secondary treatment these violations will continue.

8. The discharge from the IWTP has frequently/routinely violated the limits for chronic toxicity in Order No. 96-50. These violations occurred in 17 of the last 20 months; without secondary treatment these violations will continue.

9. The discharge from the IWTP has frequently/routinely violated the concentration and mass loading limits for ammonia in Order No. 96-50. These violations occurred in 15 of the last 20 months; without secondary treatment these violations will continue.

10. The cost of building the secondary treatment facilities is estimated at $30 million. Six percent of $30 million per month is an amount of a coercive civil penalty reasonably necessary to assure compliance.

11. A coercive civil penalty of ten thousand dollars ($10,000) per day for each violation identified in findings 4 through 9, which amounts to a total amount of $60,000 per day or approximately $1.8 million per month is necessary to compel IBWC to make the necessary commitment to avoid continuous multiple violations due to the failure to spend the amount the IBWC needs to build the secondary treatment facilities described in its ROD. This monthly amount is 6% of the estimated cost of building the secondary treatment facilities. This amount does not include any amount intended to punish or redress previous violations. A lesser amount would not provide the IBWC with the incentive to do the work necessary to prevent these violations.

12. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from certain provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15321, Chapter 3, Title14 of the California Code of Regulations.

IT IS HEREBY ORDERED, That pursuant to Section 13301 and Section 13308 of the California Water Code:

1. Directive five (5) of Cease and Desist Order No. 96-52 is modified as follows:
Until December 31, 2000, the IBWC shall comply with the effluent limitations listed in Directive six (6) of Cease and Desist Order No. 96-52. After December 31, 2000, the IBWC shall comply with all portions of Order No. 96-50 and Monitoring and Reporting Program No. 96-50, regardless of the discharge location.

2. Except as expressly provided herein, no term or condition of Order No. 96-50 Waste Discharge Requirements, or any subsequent order prescribing waste discharge requirements for this facility, or Cease and Desist Order No. 96-52 is superceded by this addendum. The terms and condition of Order No. 96-50 and Cease and Desist Order No. 96-52 shall remain in full force and effect.

3. The IBWC shall incur a civil penalty of **ten thousand dollars ($10,000)** for each day the IBWC violates the limits for TSS in Order No. 96-50 after December 31, 2000.

4. The IBWC shall incur a civil penalty of **ten thousand dollars ($10,000)** for each day the IBWC violates the limits for CBOD5 in Order No. 96-50 after December 31, 2000.

5. The IBWC shall incur a civil penalty of **ten thousand dollars ($10,000)** for each day the IBWC violates the limits for acute toxicity in Order No. 96-50 after December 31, 2000.

6. The IBWC shall incur a civil penalty of **ten thousand dollars ($10,000)** for each day the IBWC violates the limits for chronic toxicity in Order No. 96-50 after December 31, 2000.

7. The IBWC shall incur a civil penalty of **ten thousand dollars ($10,000)** for each day the IBWC violates the limits for ammonia in Order No. 96-50 after December 31, 2000.

8. The IBWC shall incur a civil penalty of **ten thousand dollars ($10,000)** for each day after December 31, 2000, the IBWC fails to complete the secondary treatment process facilities and discharge secondary treated effluent.

I, John H. Robertus, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on November 8, 2000.

JOHN H. ROBERTUS
Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 2
TO
CEASE AND DESIST ORDER NO. 96-52

INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. Order No. 96-50, NPDES Permit No. CA0108928, Waste Discharge Requirements for the International Boundary and Water Commission U.S. Section International Wastewater Treatment Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall San Diego County established requirements for the discharge of 25 million gallons per day (MGD) of treated wastewater from the International Wastewater Treatment Plant (IWTP) to the Pacific Ocean through the South Bay Ocean Outfall. Cease and Desist Order No. 96-52, International Boundary and Water Commission U.S. Section International Wastewater Treatment Plant South Bay Ocean Outfall San Diego County, as amended by Addendum No. 1, establishes a time schedule for achieving compliance with secondary effluent limitations as outlined in Order No. 96-50, establishes interim advanced primary treatment effluent limitations, establishes an interim flowrate prohibition, prohibits discharge of sewage to the Tijuana River from the IWTP and associated facilities, and establishes a new time schedule for completion of the Supplemental Environmental Impact Statement, Record of Decision, and South Bay Ocean Outfall.

2. Based on analytical results from pre-discharge operation, effluent from the IWTP will not meet various acute toxicity limits in Order No. 96-50.

3. The International Boundary and Water Commission (IBWC) requested an amendment to Cease and Desist Order No 96-52 which will allow IBWC to discharge effluent with acute toxicity exceeding the effluent limitation specified in Order No. 96-50 to the Pacific Ocean through the South Bay Ocean Outfall on or about November 16, 1998, for a period not to exceed eighteen months.

4. Discharge of advanced-primary effluent from the IWTP through the South Bay Ocean Outfall will minimize untreated sewage flows in the Tijuana River and ocean surf zone while the discharger resolves the problems presented by the acute toxicity of Mexican sewage. The discharge of advanced-primary effluent from the IWTP through the South Bay Ocean Outfall

will provide better overall environmental protection than allowing the raw sewage from Tijuana to flow to the Tijuana River and into the United States.

5. Solving the acute toxicity problem will involve conducting a Toxicity Identification Evaluation (TIE) which is part of a Toxicity Reduction Evaluation (TRE). The reduction of toxicity will involve discussions with the Mexican government, in accordance with international agreements set forth in Minutes 283 and 296, and lead to actions that will have to take place in Mexico.

6. The Regional Board at a public meeting on October 14, 1998 held a public hearing and heard and considered all comments pertaining to this Second Addendum to Cease and Desist Order No. 96-52.

7. This enforcement order is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15321, Chapter 3, Title 14 of the California Code of Regulations.

IT IS HEREBY ORDERED That pursuant to California Water Code Section 13301 the International Boundary and Water Commission, U.S. Section (IBWC) shall comply with the following directives:

1. IBWC shall submit a report with the current results of the Toxicity Identification Evaluation (TIE) by November 1, 1998 and shall submit the final report of the completed TIE by August 1, 1999.

2. IBWC shall achieve compliance with the discharge specification B.2.a. acute toxicity in Order No. 96-50 by May 16, 2000. All other discharge specifications in B.2.a. shall apply to the undiluted effluent from IWTP discharged through the South Bay Ocean Outfall as specified in Order No. 96-50.

3. IBWC shall, with the explicit concurrence of US EPA, submit a definitive schedule for selection, installation, and implementation of secondary treatment at the IWTP, including firm dates for all significant milestones, to this Board prior to November 18, 1998.

4. IBWC shall achieve a Record of Decision for implementation of secondary treatment at the IWTP in accordance with the schedule submitted pursuant to directive 3 of this order, prior to May 1, 1999.

I, John H. Robertus, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on October 14, 1998.

JOHN H. ROBERTUS
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 1
TO
CEASE AND DESIST ORDER NO. 96-52

INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. On November 14, 1996, this Regional Board adopted Order No. 96-50, NPDES Permit No. CA0108928, Waste Discharge Requirements for the International Boundary and Water Commission U.S. Section International Wastewater Treatment Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall San Diego County. Order No. 96-50 established requirements for the discharge of 25 million gallons per day (MGD) of treated wastewater from the International Wastewater Treatment Plant (IWTP) to the Pacific Ocean through the South Bay Ocean Outfall. Concurrently, the Regional Board also issued Cease and Desist Order No. 96-52, International Boundary and Water Commission U.S. Section International Wastewater Treatment Plant South Bay Ocean Outfall San Diego County to prohibit discharge of sewage to the Tijuana River from the IWTP and associated facilities, establish a time schedule for achieving compliance with the effluent limitations in Order No. 96-50, establish interim advanced primary treatment effluent limitations, and establish an interim flowrate prohibition.

2. Directive 4 of Cease and Desist Order No. 96-52 established a compliance date of June 30, 1998 to complete construction and begin operation of the South Bay Ocean Outfall, and submit the final Supplemental Environmental Impact Statement (SEIS) and signed Record of Decision.

3. By letters dated April 30, 1998 and February 27, 1998, the International Boundary and Water Commission (IBWC) requested an extension to several compliance dates in Directive 4. The IBWC requested to change the compliance dates to August 31, 1998 to submit the Final SEIS, October 15, 1998 to submit the signed Record of Decision, and February 15, 1999 to complete construction and begin operation of the ocean outfall.

4. The IWTP is being constructed in phases. The advanced primary treatment phase of the IWTP was completed in December 1996, and the South Bay Ocean Outfall was scheduled to be completed by June 30, 1998. However, due to construction delays, the South Bay Ocean Outfall will not be completed by June 1998. The new completion and operation date is scheduled for February 15, 1999.

5. The IBWC and the U.S. Environmental Protection Agency (USEPA) prepared a draft SEIS for long term treatment options, including secondary treatment, for the IWTP. The title of the SEIS was changed from "Alternatives to Activated Sludge" to "Long Term Treatment Options" to more accurately characterize the document. The SEIS was scheduled to be finalized and a Record of Decision signed by June 1998 as required in directive 4 of Cease and Desist Order No. 96-52. However, because the complexity and extent of analyses of the SEIS exceeded initial estimates, the draft SEIS was issued later than expected. In addition the large number of public responses and the need to select a preferred alternative will further extend the time required to complete the Final SEIS. The IBWC has requested to change the compliance date to August 31, 1998 to complete the Final SEIS. Since a 30-day comment period is required after release of the Final SEIS, the IBWC has requested to change the compliance date to October 15, 1998 to submit a signed Record of Decision.

6. The Regional Board at a public meeting on May 13, 1998 held a public hearing and heard and considered all comments pertaining to this Addendum to Cease and Desist Order No. 96-52.

7. This enforcement order is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15321, Chapter 3, Title 14 of the California Code of Regulations.

IT IS HEREBY ORDERED That pursuant to California Water Code Section 13301 the International Boundary and Water Commission, U.S. Section (IBWC) shall comply with the following directives:

1. IBWC shall achieve compliance for the following tasks in accordance with the following time schedule:

	TASK	COMPLIANCE DATE
a.	Submit a copy of the final Long Term Treatment Options SEIS.	August 31, 1998
b.	Submit a signed Record of Decision	October 15, 1998
c.	Complete the South Bay Ocean Outfall and initiate discharge through the outfall.	February 15, 1999

2. Tasks a. and b. replace Task b. of directive 4 of Cease and Desist Order No. 96-52. Task c. replaces Task c. of directive 4 of Cease and Desist Order No. 96-52. All other directives of Cease and Desist Order No. 96-52 shall remain in full force and effect.

I, John H. Robertus, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on May 13, 1998.

JOHN H. ROBERTUS
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CEASE AND DESIST ORDER NO. 96-52

INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. On November 14, 1996, this Regional Board adopted Order No. 96-50, NPDES Permit No. CA0108928, Waste Discharge Requirements for the International Boundary and Water Commission, U.S. Section, International Wastewater Treatment Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall. Order No. 96-50 established requirements for the discharge of 25 million gallons per day (MGD) of treated wastewater from the International Wastewater Treatment Plant (IWTP) to the Pacific Ocean through the South Bay Ocean Outfall. Order No. 96-50 contains secondary treatment effluent limitations as required by the Federal Water Pollution Control Act (Clean Water Act). Additional effluent limitations and receiving water standards are established as specified in the Water Quality Control Plan for Ocean Waters of California (California Ocean Plan), March 22, 1990.

2. The IWTP is being constructed in phases. The South Bay Land Outfall was completed in March 1994. The advanced primary treatment phase of the IWTP is scheduled to be completed in December 1996, the South Bay Ocean Outfall is scheduled to be completed in June 1998, and the secondary treatment phase of the IWTP is scheduled to be completed by December 31, 2000.

3. The IWTP may begin advanced primary treatment of sewage in January, 1997. The International Boundary and Water Commission, U.S. Section (IBWC) and U.S. Environmental Protection Agency (EPA) are preparing an Interim Operation Supplemental Environmental Impact Statement (SEIS) to consider the discharge of advanced primary treated effluent during the interim period before secondary treatment is

available or the ocean outfall is complete. The Interim Operation SEIS is scheduled to be finalized with the Record of Decision signed by January, 1997.

4. The existing Mexican conveyance system includes Pump Station No. 1, a 42-inch force main, and the conveyance canal which carry Tijuana's raw sewage to the San Antonio de los Buenos Treatment Plant in Mexico. Pump Station No. 1 has an operational capacity of 36 MGD. Sewage from western Tijuana enters the conveyance system approximately 2 miles south of the border. An average flow of 17 MGD is treated at the San Antonio de los Buenos Treatment Plant. The remaining flow is bypassed around the treatment plant. Raw sewage and treated sewage from the San Antonio de los Buenos Treatment Plant discharges to the surf discharge point at Punta San Antonio de los Buenos. Mexico has agreed to continue conveying sewage at the current flow rate until the South Bay Ocean Outfall is complete.

5. The City of San Diego has an Emergency Connection from Mexico to the City's sewage collection system. The Emergency Connection has a maximum constant flow capacity of 13 MGD. Mexican sewage flows in excess of the capacity of Mexico's Pump Station No. 1 and conveyance canal are currently discharged to the Emergency Connection. Advanced primary treated effluent may be discharged to the Emergency Connection before the South Bay Ocean Outfall is complete.

6. Mexico may build a new pump station and pipeline parallel to their existing Pump Station No. 1 and the conveyance canal to the surf discharge point at Punta San Antonio de los Buenos. This parallel Mexican conveyance system may be used to discharge advanced primary treated effluent to the Mexican surf until the South Bay Ocean Outfall is complete.

7. According to the Interim Operation SEIS, advanced primary treated effluent may be discharged to the Tijuana River if Mexican sewage flows exceed the capacity of the existing Mexican conveyance system plus the City of San Diego's Emergency Connection before the new parallel Mexican conveyance system is complete and before the South Bay Ocean Outfall is complete. It is anticipated that no untreated or treated sewage would be discharged to the Tijuana River from the IWTP during dry weather if a non-permeable or lined earthen flow storage basin is constructed to equalize the flows until the South Bay Ocean Outfall is completed. Construction of this earthen flow storage basin is being considered in the Interim Operation SEIS.

8. Since October 1991, Mexico has operated a diversion structure in the Tijuana River in Mexico about 325 feet upstream of the international border. A mixture of river water and sewage can be captured and diverted to Pump Station No. 1. During dry weather, up to 13 MGD of sewage-contaminated flows can be pumped from the Tijuana River into Mexico's collection system and to Pump Station No. 1 if capacity is available. This river diversion structure is operated until flows in the Tijuana River exceed 13 MGD. After flows in the river exceed 13, the river diversion structure is removed from operation

which allows wet-weather and storm flows to pass through to the United States even if contaminated with sewage.

9. Advanced primary treated effluent is planned to be discharged to the Pacific Ocean when the South Bay Ocean Outfall is complete. This discharge of advanced primary effluent is expected to violate the effluent limitations for Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), total suspended solids, and oil and grease specified in B.2.a. and B.3 of Order No. 96-50.

10. The advanced primary treatment design capacity of the IWTP is an average flowrate of 25 MGD with a peak flowrate of 75 MGD. The secondary treatment design capacity of the IWTP is 25 MGD with no peaking factor. Due to wet weather flows, the IWTP is expected to violate Prohibition No. A.4 of Order No. 96-50 which prohibits any flow which exceeds the 25 MGD design capacity of the secondary treatment facilities. The advanced primary treatment facilities have the design capacity to treat wet weather flow in excess of 25 MGD up to 75 MGD.

11. This Cease and Desist Order prohibits discharges of sewage to the Tijuana River from the IWTP and associated facilities, establishes a time schedule for achieving compliance with the effluent limitations in Order No. 96-50, establishes interim advanced primary treatment effluent limitations, and establishes an interim flowrate prohibition. The interim advanced primary treatment effluent limitations established in this Order are derived from the anticipated effluent quality submitted with the NPDES application dated May 24, 1996. Discharges of sewage from the Mexican sewage conveyance system in Mexico are not subject to this Cease and Desist Order

12. The IBWC and EPA are preparing an Alternatives to Activated Sludge SEIS because the activated sludge secondary treatment facilities can not be completed under the current budget. Some alternatives which will be considered in this SEIS are: 1) complete the activated sludge phase of the IWTP as designed, 2) complete the activated sludge phase of the IWTP with added flow equalization, 3) construct a pond system for treatment, and 4) operate the IWTP with advanced primary treatment only. The Alternatives to Activated Sludge SEIS is scheduled to be finalized and a Record of Decision signed by June, 1998. The Regional Board may revise the time schedule in this Cease and Desist Order in accordance with the final Alternatives to Activated Sludge SEIS.

13. The Regional Board, at a public meeting on October 10, 1996, heard comments pertaining to the issuance of this Cease and Desist Order for discharge of advanced primary treated effluent from the International Wastewater Treatment Plant to the Tijuana River or through the South Bay Ocean Outfall. The Regional Board considered all comments received at the October 10 public meeting and during the public comment period prior to adoption of this Cease and Desist Order on November 14, 1996.

14. This enforcement order is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15321, Chapter 3, Title 14 of the California Code of Regulations.

IT IS HEREBY ORDERED That pursuant to California Water Code Section 13301 the International Boundary and Water Commission, U.S. Section (IBWC) shall comply with the following directives:

1. Discharge of treated or untreated sewage to the Tijuana River from the IWTP, the South Bay Land Outfall, the South Bay Ocean Outfall, or any other sewage facilities in the United States associated with Mexican sewage is prohibited.

2. The IBWC shall take all reasonable measures to prevent discharges of treated sewage to the Tijuana River. If a discharge of treated sewage to the Tijuana River occurs, the IBWC shall take all reasonable measures necessary to minimize both the volume released and the impacts to the Tijuana River. Reasonable measures include:

    a. Coordination with Mexico to ensure that the existing Mexican sewage conveyance system is utilized at optimum capacity;

    b. Use of the optimum capacity of the Emergency Connection;

    c. Equalization of sewage flows to the maximum extent practicable;

    d. Coordination with Mexico to ensure that the new parallel Mexican sewage conveyance system, when completed, is utilized at optimum capacity;

    In the event that a discharge of treated sewage to the Tijuana River occurs or is anticipated, IBWC shall submit a report to the Regional Board demonstrating that all reasonable measures were taken to prevent or minimize the discharge volume and impacts. If the discharge occurs prior to completion of the South Bay Ocean Outfall, the Regional Board will consider the following factors in determining if additional enforcement action will be initiated: whether the measures described above were taken; any recommendations from the Health Officer of the County of San Diego regarding the necessity of the discharge; the degree of water quality impairment; past history of discharges; degree of discharger cooperation; culpability of the discharger; financial resources of the discharger; circumstances leading to the discharge; probability of the discharge to continue; any voluntary cleanup or remediation actions taken; any economic benefit realized; and any other matters as justice may require.

3. IBWC shall comply with all portions of Order No. 96-50 and Monitoring and Reporting Program No. 96-50 regardless of the discharge location unless otherwise specified in this Cease and Desist Order.

4. The IBWC shall achieve compliance with the effluent limitations in Order No. 96-50 in accordance with the following time schedule:

	TASK	**COMPLIANCE DATE**
a.	Submit a copy of the final Interim Operation SEIS and signed Record of Decision.	January 31, 1997
b.	Submit a copy of the final Alternatives to Activated Sludge SEIS and signed Record of Decision.	June 30, 1998
c.	Complete the South Bay Ocean Outfall and initiate discharge through the outfall.	June 30, 1998
d.	Initiate construction for the secondary treatment process facilities.	December 31, 1998
e.	Complete the secondary treatment process facilities and begin discharge of secondary treated effluent.	December 31, 2000

5. Until compliance with the effluent limitations for $CBOD_5$, total suspended solids, and grease and oil specified in B.2.a. and B.3. of Order No. 96-50 is achieved in accordance with the time schedule specified in Directive No. 0 of this Order, the IBWC shall comply with the following interim effluent limitations for all discharges to waters of the state:

6. a.

Constituent/ Property	Units	Monthly Average (30 day)	Weekly Average (7 day)	Maximum at any time
$CBOD_5$	mg/l lb/day	210 43,800	230 47,900	250 52,100
total suspended solids (TSS)	mg/l lb/day	100 20,800	120 25,000	150 31,300
oil & grease	mg/l lb/day	50 10,400	65 13,500	95 19,800

b. Percent Removal of $CBOD_5$ and TSS

i. The 30-day average percent removal of $CBOD_5$ shall not be less than 45 percent.

ii. The 30-day average percent removal of TSS shall not be less than 75 percent.

7. If a discharge of treated effluent to the Tijuana River occurs, the IBWC shall comply with effluent limitations for total chlorine residual of 19 ug/l daily maximum.

8. Until the secondary treatment process facilities are complete, IBWC shall comply with the following prohibition:

Discharge to the Pacific Ocean through the South Bay Ocean Outfall in excess of 25.0 MGD average dry weather flow rate is prohibited unless the discharger obtains revised waste discharge requirements authorizing an increased flow rate.

11. Once the South Bay Ocean Outfall is complete, the IBWC shall comply with the entire Monitoring and Reporting Program No. 96-50.

12. The IBWC shall submit a written report to the Regional Board on or before each compliance date described in Directive No. 4 of this Order. The report shall contain information to indicate if the required task has been completed as required under Directive No. 4 of this Order.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on November 14, 1996.

John H. Robertus
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 2
TO
ORDER NO. 96-50
NPDES PERMIT NO. CA0108928

WASTE DISCHARGE REQUIREMENTS
FOR THE
INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San-Diego Region (hereinafter Regional Board) finds that:

1. On November l4, 1996, this Regional Board adopted 0rder No. 96-50, NPDES Permit No. CA0108928, Waste Discharge Requirements for the International Boundary and Water Commission U.S. Section International Wastewater Treatment Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall San Diego County. Order No. 96-50 established requirements for the discharge of 25 million gallons per day (MGD) of treated wastewater from the International Wastewater Treatment Plant (IWTP) to the Pacific Ocean through the South Bay Ocean Outfall.

2. Pretreatment Requirement G. 1 of Order No. 96-50 states "In consultation with the Government of Mexico, the discharger shall develop and implement mass emission rate and concentration limitations for the influent to the IWTP (influent limitations) for pollutants that may cause or contribute to interference, pass through or other problems described at 40 CFR 403.5. The influent limits shall prevent violations of the California Ocean Plan and this Order."

3. On September 17, 1997, this Regional Board adopted Addendum No. 1 to Order No. 96-50 which established advanced primary treatment influent limitations for 12 primary pollutants of concern and identified 4 other pollutants of concern which will be monitored according to Monitoring and Reporting Program No. 96-50 and will studied further to evaluate potential risks and health and safety concerns.

4. Pretreatment Requirement G.5 of Order No. 96-50 requires that influent limitations be developed for advanced primary and secondary treatment. These influent limitations were to be developed and implemented according to the following schedule:

Task	Duration[1]	Deadline
Initiate development of influent limitations for advanced primary and secondary treatment		January 30, 1997 *(completed)*
Submit a project report, which, at a minimum, includes the influent limitations, the basis for the influent limitations, a comparison of the influent limitations with the IWTP influent and with any Mexican wastewater quality standards, a sensitivity analysis, and an achievability analysis.	545 days	July 30, 1998
Submit a sampling compliance plan to determine if the IWTP influent is in compliance with the influent limitations. This sampling compliance plan shall meet the minimum requirements described in Section G.6 of Order No. 96-50. The plan shall be subjected to the approval of EPA and the State of California.	30 days	August 31, 1998
Implement the sampling compliance plan.	60 days	October 30, 1998
Begin remedial action to achieve limitations as described in Section G.7 of Order No. 96-50 (if required).	180 days	April 30, 1999

[1]approximate calendar days

5. By letter dated February 27, 1998, the IBWC requested an extension of the due date to complete headworks allocation studies for primary and secondary treatment. The IBWC also requested an extension of the due date to select a long-term treatment alternative for the IWTP. Cease and Desist Order No. 96-52 was amended on May 13, 1998 to extend the due date to select a long-term treatment alternative for the IWTP to August 31, 1998. It is anticipated that the funding process for constructing secondary treatment facilities will take up to two years; therefore, the headworks allocations study for primary and secondary treatment would be delayed accordingly for approximately two years.

6. The issuance of this Addendum is exempt from the requirements for preparation of environmental documents under the California Environmental Quality Act in accordance with Section 13389 of the California Water Code.

7. The Regional Board has notified the International Boundary Water Commission and all known interested parties of their intent to modify Order No. 96-50. This Addendum constitutes a modification to the NPDES permit. Order No. 96-50 is being modified for the sole purpose of revising the Pretreatment Requirement.

modification to the NPDES permit. Order No. 96-50 is being modified for the sole purpose of revising the Pretreatment Requirement.

8. The Regional Board, in a public hearing held on May 13,1998, heard and considered all comments pertaining to the modification of Order No. 96-50.

IT IS HEREBY ORDERED THAT:

1. Pretreatment Requirement G.5 of Order No. 96-50 is modified as follows:

   The influent limitations for advanced primary and secondary treatment shall be developed and implemented according to the following schedule:

Task	Deadline
Initiate development of influent limitations for advanced primary and secondary treatment	January 30, 1997 *(completed)*
Submit a project report, which, at a minimum, includes the influent limitations, the basis for the influent limitations, a comparison of the influent limitations with the IWTP influent and with any Mexican wastewater quality standards, a sensitivity analysis, and an achievability analysis.	January 2, 2001
Submit a sampling compliance plan to determine if the IWTP influent is in compliance with the influent limitations. This sampling compliance plan shall meet the minimum requirements described in Section G.6 of Order No. 96-50. The plan shall be subjected to the approval of EPA and the State of California.	February 28, 2001
Implement the sampling compliance plan.	April 30, 2001
Begin remedial action to achieve limitations as described in Section G.7 of Order No. 96-50 (if required).	October 31, 2001

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on May 13, 1998.

JOHN H. ROBERTUS
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 1
TO
ORDER NO. 96-50
NPDES PERMIT NO. CA0108928

WASTE DISCHARGE REQUIREMENTS
FOR THE
INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San-Diego Region (hereinafter Regional Board) finds that:

1. On November 14, 1996, this Regional Board adopted Order No.96-50, NPDES Permit No. CA0108928, Waste Discharge Requirements for the International Boundary and Water Commission U.S. Section International Wastewater Treatment Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall San Diego County. Order No. 96-50 established requirements for the discharge of 25 million gallons per day (MGD) of treated wastewater from the International Wastewater Treatment Plant (IWTP) to the Pacific Ocean through the South Bay Ocean Outfall.

2. Pretreatment Requirement G. 1 of Order No. 96-50 states "In consultation with the Government of Mexico, the discharger shall develop and implement mass emission rate and concentration limitations for the influent to the IWTP (influent limitations) for pollutants that may cause or contribute to interference, pass through or other problems described at 40 CFR 403.5. The influent limits shall prevent violations of the California Ocean Plan and this Order."

3. Pretreatment Requirement G.4 of Order No. 96-50 requires the discharger to submit a project report to include influent limitations, the basis for the influent limitations, a comparison of the influent limitations with the IWTP influent and with any Mexican wastewater quality standards, a sensitivity analysis, and an achievability analysis by June 18, 1997.

4. On June 4, 1997, the Regional Board received a report titled "Development of Headworks Allocations for the South Bay International Wastewater Treatment Plant - Final Report" (Final Report) which includes all the necessary information as required in the above finding.

5. The Final Report identified 16 primary pollutants of concern, including arsenic, beryllium, cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver, zinc, total HCH (Lindane), Aldrin, DDTs, PAHs, and carbon disulfide. Influent limitations could not be developed for Aldrin, DDTs, PAHs, and carbon disulfide, but these constituents will be monitored according to the Monitoring and Reporting Program No. 96-50 and will be studied further in the future to evaluate potential risks and health and safety concerns.

6. The issuance of this Addendum is exempt from the requirements for preparation of environmental documents under the California Environmental Quality Act in accordance with Section 13389 of the California Water Code.

7. The Regional Board has notified the International Boundary Water Commission and all known interested parties of their intent to modify Order No. 96-50. This Addendum constitutes a modification to the NPDES permit. Order No. 96-50 is being modified for the sole purpose of revising the Petreatment Requirement.

8. The Regional Board, in a public hearing held on September 17, 1997, heard and considered all comments pertaining to the modification of Order No. 96-50.

IT IS HEREBY ORDERED THAT:

Pretreatment Requirement G.9 of Order No. 96-50 is added as follows:

9. **Influent** Limitations

a. The following influent limitations shall apply to influent in the IWTP prior to any treatment processes:

Constituent/Property	Units	Influent Limitations	Basis
arsenic	mg/l lb/day	0.024 5.0	Monthly Average
beryllium	mg/l lb/day	0.0025 0.52	Monthly Average
cadmium	mg/l lb/day	0.061 13	Monthly Average
chromium	mg/l lb/day	1.1 230	Monthly Average
copper	mg/l lb/day	0.15 32	6-Month Median

Constituent/Property	Units	Influent Limitations	Basis
cyanide	mg/l lb/day	0.075 16	6-Month Median
lead	mg/l lb/day	0.16 34	Monthly Average
mercury	mg/l lb/day	0.0054 1.1	Maximum
nickel	mg/l lb/day	0.44 93	6-Month Median
silver	mg/l lb/day	0.052 11	6-Month Median
zinc	mg/l lb/day	1.1 220	Monthly Average
total HCH (Lindane)	mg/l lb/day	0.00042 0.088	6-Month Median

b. In the event that the IWTP exceeds influent limitations, the Regional Board will consider any effluent limitation violations as well as action taken by the IBWC to identify the cause and prevent a reoccurrence of influent limitation violations before initiating additional enforcement action.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on September 17, 1997.

JOHN H. ROBERTUS
Executive Officer

November 14, 1996

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 96-50
NPDES NO. CA0108928

WASTE DISCHARGE REQUIREMENTS
FOR THE
INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On May 24, 1996, the International Boundary and Water Commission, United States Section (IBWC) submitted an application for an NPDES permit for the discharge of treated wastewater to the Pacific Ocean through the South Bay Ocean Outfall. The application is for a discharge of up to 25 million gallons per day (MGD) secondary effluent from the International Wastewater Treatment Plant (IWTP) to the South Bay Ocean Outfall (SBOO).

2. Since the 1930s, raw sewage flowing into the United States from Mexico has posed a serious threat to public health and the environment in the South Bay communities of San Diego. This problem has gradually worsened over the years with the substantial growth of Tijuana's population and industrial sector. Although interim measures by the U.S. and Mexican governments have been effective on a short-term basis, untreated wastewater still flows into the Tijuana River today. In July 1990, the U.S. and Mexico agreed to build an International Wastewater Treatment Plant (IWTP) on the U.S. side of the border as part of a regional solution. The IWTP will treat sewage flows that exceed the capacity of the existing Tijuana sewage conveyance and treatment system.

3. The IWTP and South Bay Ocean Outfall will treat and dispose of sanitary sewage originating from eastern Tijuana, Mexico. Influents to the IWTP will include sewage from domestic and industrial sources. The IWTP is being constructed in phases. The South Bay Land Outfall was completed in March 1994. The advanced primary treatment phase of the IWTP is scheduled to be completed in December 1996, the South Bay Ocean Outfall is scheduled to be completed in June 1998, and the secondary treatment phase of the IWTP is scheduled to be completed by December 31, 2000.

4. The IWTP is located at 2415 Dairy Mart Road in San Diego, adjacent to the Tijuana River and the International Border. Attachment 1 shows the location of the IWTP.

5. The applications states that wastewater treatment operations and processes at the IWTP will be screening, grit removal, chemically assisted sedimentation, activated sludge aeration, and secondary sedimentation. Facilities to chlorinate and dechlorinate the effluent as necessary are also planned at the IWTP. Treated wastewater will be discharged to the Pacific Ocean through the South Bay Land Outfall followed by the South Bay Ocean Outfall. Sludge will be thickened using dissolved air floatation, dewatered using belt filter presses, and stabilized with lime. Dewatered sludge will be trucked to Mexico.

6. The secondary treatment design capacity of the IWTP is 25 MGD with no peaking factor. The advanced primary treatment design capacity of the IWTP is an average flowrate of 25 MGD with a peak flowrate of 75 MGD.

7. South Bay Land Outfall extends 12,300 feet from the IWTP to the mouth of Goat Canyon to the South Bay Ocean Outfall.

8. The South Bay Ocean Outfall will extend 23,600 feet from the South Bay Land Outfall in a westerly direction from near the mouth of the Tijuana River. The South Bay Ocean Outfall will consist of a vertical drop shaft descending 190 feet, a tunnel extending 18,970 feet, a riser assembly ascending 160 feet, a seafloor outfall extending 4,670 feet, and a wye diffuser. From this wye diffuser, two diffuser legs will extend approximately 1,974 feet north and south and terminate at a depth of approximately 93 feet below sea level. The terminus of the diffuser will be located at Latitude 32° 32' 15" North and Longitude 117° 11' 00" West. The South Bay Ocean Outfall is designed for an average daily flowrate of 174 MGD with a peak hydraulic capacity of 333 MGD. A portion of the South Bay Ocean Outfall design capacity is reserved for two planned City of San Diego treatment plants: Otay Water Reclamation Plant and South Bay Treatment Plant.

9. The IBWC reported, by letter dated August 16, 1996, that the minimum initial dilution of 100 was calculated using the computer models UMERGE and TRACKER and characteristics for the Preliminary 1990 Design of the South Bay Ocean Outfall diffuser system shown below. The UMERGE model is approved by the State Board for calculation of minimum initial dilution. The TRACKER model was used to assess the possible effects of re-entrainment of previously discharged effluent. Staff of the State Water Resources Control Board determined a minimum initial dilution of 110 using the computer model UMERGE and the characteristics for the Interim Discharge of the South Bay Ocean Outfall diffuser system shown below. To be conservative, the discharge specifications in this permit are calculated using the lower minimum initial dilution of 100.

	Preliminary Design 1990	Final Design 1995	Interim Discharge
Total Annual Average Flow (MGD)	232	174	25
Diffuser Length per each of two equal legs (feet)	2400	1980	816
Number of Ports	600	660	136
Average Port Diameter (inches)	3.0	2.5	2.625
Port Spacing	8	6	6
Orientation of Ports (degrees)	0	0	0
Average Port Depth (feet below Mean Sea Level)	-85	-92.75	-93.25

10. The State Water Resources Control Board (hereinafter SWRCB) adopted a revised Water Quality Control Plan for Ocean Waters of California (California Ocean Plan) on March 22, 1990. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:

a. Industrial water supply
b. Navigation
c. Water contact recreation

d. Non-contact water recreation
e. Ocean commercial and sport fishing
f. Preservation and enhancement of Areas of Special Biological Significance (ASBS)
g. Preservation of rare and endangered species
h. Marine habitat
i. Mariculture
j. Fish migration
k. Fish spawning
l. Shellfish harvesting
m. Aesthetic enjoyment

In order to protect these beneficial uses, the Ocean Plan establishes water quality objectives (for bacterial, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions.

11. The Water Quality Control Plan, San Diego Basin (9) (Basin Plan) was adopted by the Regional Board on September 8, 1994 and subsequently approved by the SWRCB on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the SWRCB. The Basin Plan designates beneficial uses and narrative and numerical water quality objectives, and prohibitions which are applicable to the discharges regulated under this Order.

12. The Basin Plan identifies the following beneficial uses of state ocean waters to be protected:

a. Industrial service supply
b. Navigation
c. Contact water recreation
d. Noncontact water recreation
e. Commercial and sport fishing
f. Preservation of biological habitats of special significance
g. Wildlife habitat
h. Rare, threatened, or endangered species
i. Marine habitat
j. Aquaculture
k. Migration of aquatic organisms
l. Spawning, reproduction, and/or early development
m. Shellfish harvesting

The Basin Plan relies primarily on the requirements of the Ocean Plan for protection of these beneficial uses. However, the Basin Plan establishes additional water quality objectives for dissolved oxygen and pH.

13. Receiving Water Limitation No. C.1.a.(2) of this Order establishes bacterial objectives for areas where shellfish may be harvested for human consumption, as determined by the Regional Board. However, as of the date of adoption of this Order, this Regional Board has not designated any shellfish harvesting area. If and when this Regional Board, in consultation with the Department of Fish and Game, health agencies, and other interested parties, does designate shellfish harvesting areas in the vicinity of this discharge, this Order will be amended to identify the area(s) to which Receiving Water Limitation No. C.1.a.(2) applies.

14. Federal Regulations (40 CFR Part 403) establish pretreatment program requirements for POTWs which receive pollutants from industries subject to pretreatment standards. The IWTP receives sewage from eastern Tijuana in Mexico. Industries in Mexico are not subject to the pretreatment standards contained in 40 CFR Part 403. This order does not contain industrial pretreatment program requirements pursuant to 40 CFR Part 403.

15. On July 2, 1990, Mexico and the United States signed IBWC Treaty Minute No. 283 titled Conceptual Plan for the International Solution to the Border Sanitation Problem in San Diego, California/ Tijuana, Baja California. Minute No. 283 states "The Government of Mexico in accordance with laws in force in that country, in order to assure efficient treatment of Tijuana sewage in the international plant, will require all industries to provide appropriate pretreatment of wastewater that those industries may discharge into the Tijuana sewage collection system which would in turn discharge into the international sewage treatment plant." The IBWC, U.S. Section is negotiating with Mexico to initiate a pretreatment program, but due to many factors, a program similar to one implemented in the United States may not be appropriate in Mexico. The IBWC, U.S. Section, submitted a Proposed Source Control Program with the NPDES application. This Proposed Source Control Program does not satisfy the pretreatment requirements in 40 CFR Part 403. This order contains pretreatment requirements consistent with the Proposed Source Control Program.

16. On November 16, 1990, the USEPA promulgated NPDES permit application requirements for storm water discharges (40 CFR 122, 123, and 124) which are applicable to the IWTP. On November 19, 1991, the SWRCB adopted Water

Quality Order No. 91-13-DWQ, National Pollutant Discharge Elimination System General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities. Storm water discharges from wastewater treatment facilities which discharge through the SBOO are subject to the terms and conditions of Water Quality Order No. 91-13-DWQ, as amended.

17. On July 2, 1990, Mexico and the United States signed IBWC Treaty Minute No. 283 titled Conceptual Plan for the International Solution to the Border Sanitation Problem in San Diego, California/ Tijuana, Baja California. Minute No. 283 states "The Government of Mexico at a cost to Mexico shall dispose, in its territory, the sludge resulting from treatment of the City of Tijuana, Baja California sewage in the international treatment plant. Mexico would receive such sludge from the international treatment plant in the United States in vehicles operated by Mexican personnel employed directly or indirectly in the operation and maintenance of the international treatment plant."

18. Federal Regulations (40 CFR Part 503) established the final rule for the use and disposal of sewage sludge on February 19, 1993. This regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. USEPA, not this Regional Board, oversees compliance with 40 CFR Part 503. The sludge from the IWTP will be disposed of in Mexico. These Federal Regulations regarding sewage sludge are not applicable to sludge disposed of in Mexico.

19. Section 301(b)(1)(B) of the Clean Water Act (CWA) requires POTWs to meet effluent limitations based on secondary treatment as defined by the USEPA Administrator. Secondary treatment is defined by the USEPA Administrator in the federal regulations (40 CFR Part 133.100 to 40 CFR Part 133.105) in terms of three parameters: 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH. Federal regulations allow substitution of 5-day carbonaceous biochemical oxygen demand ($CBOD_5$) limitations for BOD_5 limitations. Discharge Specification B.2.a. of this Order establishes effluent limitations for $CBOD_5$, TSS and pH in accordance with federal secondary treatment regulations. In addition, Discharge Specification B.2.a. of this Order establishes "Maximum at Any Time" limitation for $CBOD_5$ and TSS based on best professional judgement. Mass emission rate (MER) limitations for $CBOD_5$ and TSS are based on a flowrate of 25.0 MGD.

20. Effluent limitations and ocean discharge criteria established under Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 405 of the CWA, as amended [33 U.S.C. 1251 et seq.], are applicable to the discharge.

21. Discharges of sewage from the Mexican sewage conveyance, treatment, or disposal system in Mexico are not subject to this Order.

22. Waste discharge requirements for this discharge must be in conformance with 40 CFR 131.12 and State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (known collectively as "antidegradation" policies). This permit is consistent with antidegradation policies because a discharge in compliance with this permit requires secondary treatment resulting in an overall improvement in water quality for the following reasons:

    a. The discharge will be removed from the Tijuana River to the Pacific Ocean, which is a less sensitive area, and the wastewater will receive secondary treatment. The discharge of secondary effluent to the ocean through the SBOO is more protective of public health and the environment;

    b. The discharger has shown that beneficial uses will be fully maintained and protected in the area of the discharge because the outfall will provide initial dilution thereby reducing the potential for receiving water impacts. The existing discharge to the Tijuana River does not provide initial dilution;

    c. The discharge of secondary effluent to the ocean through the SBOO will not cause a pollution or nuisance, and the highest water quality consistent with the maximum benefit of the state will be maintained;

    d. The discharge of secondary effluent to the ocean through the SBOO will not result in water quality less than the water quality objectives.

    e. For the reasons identified in Findings 0.a., 0.b., 0.c., and 22.d., the discharge is of maximum benefit of the people of the state; and

    f. The discharge is necessary to accommodate important social and economic development.

23. Pursuant to State Board Order No. WQ 84-7, this Order requires the discharger to "submit with its Report of Waste Discharge sufficient information to justify why any effluent proposed to be discharged to the ocean after a single use is not being reclaimed for beneficial use."

24. For the purposes of this permit, "waste" includes the IBWC's total discharge, of

whatever origin, i.e., gross, not net, discharge.

25. For the purposes of this discharge, the term "permittee" used in parts of Title 40, Code of Federal Regulations (40 CFR), incorporated into this permit by reference and/or applicable to this permit shall have the same meaning as the term "discharger" used elsewhere in this permit.

26. For the purposes of this permit, the term "Director" used in parts of 40 CFR incorporated into this permit by reference and/or applicable to this permit shall have the same meaning as the term "Regional Board" used elsewhere in this permit, except that in 40 CFR 122.41(h) and (i), the "Director" shall mean the "Regional Board, SWRCB, and EPA."

27. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
    b. Other waste discharges;
    c. The need to prevent nuisance;
    d. Past, present, and probable future beneficial uses of water;
    e. Environmental characteristics of the receiving waters under consideration, including the quality of those receiving waters;
    f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
    g. Economic considerations;
    h. The need for developing housing within the region; and
    i. The need to develop and use recycled water. (California Water Code 13263 and 13241)

28. The issuance of waste discharge requirements for this discharge is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act [Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.] in accordance with Section 13389 of the California Water Code (CWC).

29. On September 10, 1996, the Regional Board notified the IBWC and all known interested parties of its intent to issue the NPDES permit for the discharge from the IWTP through the SBOO to the Pacific Ocean. (CWC 13378 and 13384)

30. The Regional Board at a public meeting on October 10, 1996 has heard and considered all comments pertaining to the discharge of treated effluent from the

IWTP through the SBOO to the Pacific Ocean. (CWC 13378 and 13384)

31. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge from the IWTP through the SBOO to the Pacific Ocean pursuant to Section 402 of the CWA, and amendments thereto.

IT IS HEREBY ORDERED that the International Boundary and Water Commission U.S. Section (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and the regulations adopted thereunder, shall comply with the following for the handling, treatment, and disposal of wastes from the International Wastewater Treatment Plant through the South Bay Ocean Outfall:

A. PROHIBITIONSA. PROHIBITIONS

1. Compliance with the waste discharge prohibitions contained in the Basin Plan and listed in Attachment 2 hereto is required as a condition of this Order.

2. Discharges of wastes in a manner or to a location which have not been specifically authorized by this Order and for which valid waste discharge requirements are not in force are prohibited.

3. The bypassing of untreated wastes containing concentrations of pollutants in excess of those in Ocean Plan, Table A or Table B or the effluent limitations of this Order to the ocean is prohibited, except as provided for in 40 CFR 122.41 (m). (See Attachment 3 to this Order - Ocean Plan Tables A and B, and Attachment 4 - excerpts from 40 CFR.)

4. Discharge to the Pacific Ocean through the SBOO in excess of a 25.0 MGD flowrate at any time is prohibited unless the discharger obtains revised waste discharge requirements authorizing an increased flowrate.

5. Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

6. Pipeline discharge of sludge to the ocean is prohibited by federal law; the discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, without further treatment, is prohibited.

7. The discharge of sludge digester supernatant directly to the ocean, or into a waste stream that discharges to the ocean, without further treatment is prohibited.

8. The discharge of any pollutant for which effluent limitations are not established by this Order is prohibited except in the following circumstances:

   a. The pollutant has been identified in the administrative record for the permit.

   b. The pollutant has not been identified in the administrative record for the permit, so long as the discharger: (1) has complied with all applicable requirements for disclosure of information about its pollutant discharges, operations and sources of wastes; and (2) complies with all applicable requirements for notification of changes in its operations and discharges.

B. DISCHARGE SPECIFICATIONSB. DISCHARGE SPECIFICATIONS

1. The discharge shall not cause pollution, contamination, or nuisance, as those terms are defined in CWC § 13050, as a result of the treatment or discharge of wastes.

2. The following effluent limitations apply to the undiluted effluent from IWTP discharged through the SBOO.

a. Effluent Limitations For Major Constituents and Properties of Wastewater

Constituent/ Property	Units	Monthly Average (30 day)	Weekly Average (7 day)	Maximum at any time
$CBOD_5$[a]	mg/l lb/day	25 5,200	40 8,300	45 9,400
total suspended solids[a]	mg/l lb/day	30 6,300	45 9,400	50 10,000
oil & grease[b]	mg/l lb/day	25 5,200	40 8,300	75 16,000
settleable solids[b]	ml/l	1.0	1.5	3.0
turbidity[b]	NTU	75	100	225
pH[a]	pH units	Within limits of 6.0 - 9.0 at all times.		
acute toxicity[b]	TUa	1.5	2.0	2.5

b. Effluent Limitations For Toxic Materials For Protection Of Marine Aquatic Life[c]

Constituent/ Property	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
arsenic	mg/l lb/day	0.51 110	2.9 600	7.8 1,600
cadmium	mg/l lb/day	0.10 21	0.40 83	1.0 210
chromium (hexavalent)[d]	mg/l lb/day	0.20 42	0.81 170	2.0 420
copper	mg/l lb/day	0.10 21	1.0 210	2.8 580
lead	mg/l lb/day	0.20 42	0.81 170	2.0 420
mercury	ug/l lb/day	4.0 0.83	16 3.3	40 8.3
nickel	mg/l lb/day	0.51 100	2.0 420	5.1 1,000
selenium	mg/l lb/day	1.5 310	6.1 1,300	15 3,100
silver	mg/l lb/day	0.055 11	0.27 56	0.69 140
zinc	mg/l lb/day	1.2 250	7.3 1,500	19 4,000
cyanide[e]	mg/l lb/day	0.10 21	0.40 83	1.0 210
total chlorine residual[f]	mg/l lb/day	0.20 42	0.81 170	6.1 1,300
ammonia (as N)	mg/l lb/day	61 13,000	240 50,000	610 130,000
chronic toxicity	TUc	---	100	---

Constituent/ Property	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
phenolic compounds (non-chlorinated)	mg/l lb/day	3.0 630	12 2,500	30 6,300
chlorinated phenolics	mg/l lb/day	0.10 21	0.40 83	1.0 210
endosulfan[1]	ug/l lb/day	0.91 0.19	1.8 0.38	2.7 0.56
endrin	ug/l lb/day	0.20 0.042	0.40 0.083	0.61 0.13
HCH[2]	ug/l lb/day	0.40 0.083	0.81 0.17	1.2 0.25
radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 32069 of the California Code of Regulations.			

c. Effluent Limitations For Toxic, Noncarcinogenic Materials for Protection of Human Health[c]

Constituent/ Property	Units	Monthly Average (30-day)
acrolein	mg/l lb/day	22 4,600
antimony	mg/l lb/day	120 25,000
bis(2-chloroethoxy) methane	mg/l lb/day	0.44 92
bis(2-chloroisopropyl) ether	mg/l lb/day	120 25,000
chlorobenzene	mg/l lb/day	58 12,000
chromium (III)	g/l lb/day	19 4,000,000
di-n-butyl phthalate	mg/l lb/day	350 73,000
dichlorobenzenes[3]	g/l lb/day	0.52 110,000
1,1-dichloroethylene	g/l lb/day	72 150,000
diethyl phthalate	g/l lb/day	3.3 690,000
dimethyl phthalate	g/l lb/day	83 17,000,000
4,6-dinitro-2-methylphenol	mg/l lb/day	22 4,600
2,4-dinitrophenol	ug/l lb/day	0.40 83
ethylbenzene	mg/l	400

Constituent/ Property	Units	Monthly Average (30-day)
	lb/day	83,000
fluoranthene	mg/l lb/day	1.5 310
hexachlorocyclopentadiene	mg/l lb/day	5.9 1,200
isophorone	g/l lb/day	15 3,100,000
nitrobenzene	mg/l lb/day	0.49 100
thallium	mg/l lb/day	1.4 290
toluene	g/l lb/day	8.6 1,800,000
1,1,2,2-tetrachloroethane	mg/l lb/day	120 25,000
tributyltin	ug/l lb/day	0.14 0.029
1,1,1-trichloroethane	g/l lb/day	54 11,000,000
1,1,2-trichloroethane	g/l lb/day	4.3 900,000

d. Effluent Limitations for Toxic, Carcinogenic Materials for Protection of Human Health[c]

Constituent/ Property	Units	Monthly Average (30-day)
acrylonitrile	ug/l lb/day	10 2.1
aldrin	ng/l lb/day	2.2 0.00046
benzene	mg/l lb/day	0.60 120
benzidine	ng/l lb/day	7.0 0.0015
beryllium	ug/l lb/day	3.3 0.69
bis(2-chloroethyl)ether	ug/l lb/day	4.5 0.94
bis(2-ethylhexyl)phthalate	ug/l lb/day	350 73
carbon tetrachloride	ug/l lb/day	0.91 19
chlordane[4]	ng/l lb/day	2.3 0.00048
chloroform	mg/l lb/day	13 2,700
DDT[5]	ng/l lb/day	17 0.0035
1,4-dichlorobenzene	mg/l lb/day	1.8 380
3,3-dichlorobenzidine	ug/l lb/day	0.82 0.17
1,2-dichloroethane	mg/l	13

Constituent/ Property	Units	Monthly Average (30-day)
	lb/day	2,700
dichloromethane	mg/l lb/day	45 9,400
1,3-dichloropropene	mg/l lb/day	0.90 190
dieldrin	ng/l lb/day	4.0 0.00083
2,4-dinitrotoluene	ug/l lb/day	260 54
1,2-diphenylhydrazine	ug/l lb/day	16 3.3
halomethanes[6]	mg/l lb/day	13 2,700
heptachlor[7]	ng/l lb/day	73 0.015
hexachlorobenzene	ng/l lb/day	21 0.0044
hexachlorobutadiene	mg/l lb/day	1.4 290
hexachloroethane	ug/l lb/day	250 52
N-nitrosodimethylamine	mg/l lb/day	0.74 150
N-nitrosodiphenylamine	ug/l lb/day	250 52
PAHs[8]	ug/l lb/day	0.89 0.19
PCBs[9]	ng/l lb/day	1.9 0.00040

Constituent/ Property	Units	Monthly Average (30-day)
TCDD equivalents[10]	pg/l lb/day	0.39 0.000000081
tetrachloroethylene	mg/l lb/day	1.0 210
toxaphene	ng/l lb/day	21 0.0044
trichloroethylene	mg/l lb/day	2.7 560
2,4,6-trichlorophenol	ug/l lb/day	29 6.0
vinyl chloride	mg/l lb/day	3.6 750

g/l = grams per liter
mg/l = milligrams per liter
ug/l = micrograms per liter
ng/l = nanograms per liter
pg/l = picograms per liter
ml/l = milliliters per liter
NTU = Nephelometric Turbidity Units
TUa = toxic units acute
TUc = toxic units chronic
lb/day = pounds per day

a. Effluent limitations were determined as described in Finding No. 19.

b. Effluent concentration limitations are the limiting concentrations specified in Table A of the Ocean Plan. Mass emission rate limitations, where applicable, were determined using procedures outlined in the 1990 version of the Ocean Plan and a flowrate of 25 MGD.

c. Effluent concentration limitations were determined using the procedures outlined in the 1990 version of the Ocean Plan and using water quality objectives from Table B and background seawater concentrations from the 1990 version of the Ocean Plan, an initial dilution of 100, and a flowrate of 25 MGD.

d. The discharger may, at its option, meet this limitation as a total chromium limitation.

e. If the discharger can demonstrate to the satisfaction of the Regional Board (subject to USEPA

approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by Standard Methods 4500CN (A - M) G, H, and J (Standard Methods for the Examination of Water and Wastewater. Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation. Nineteenth edition.)

f. The effluent concentration and mass emission rate limitations for total chlorine residual are based on a continuous discharge of chlorine. Effluent concentration limitations for total chlorine residual which are applicable to intermittent discharges not exceeding two hours shall be determined through the use of the following equations:

$$\log Co = -0.43 (\log x) + 1.8$$
$$Ce = Co + Dm (Co - Cs)$$

where:

Co = the concentration (in ug/l) to be met at the completion of initial dilution
x = the duration of uninterrupted chlorine discharge in minutes
Ce = the effluent concentration limitation (in ug/l) to apply when chlorine is being intermittently discharged
Dm = the minimum probable initial dilution
Cs = the background seawater concentration = 0

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3. The 30-day average percent removal of $CBOD_5$ and TSS shall not be less than 85 percent.

4. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

5. Waste discharged from IWTP through the SBOO must be essentially free of:

   a. Material that is floatable or will become floatable upon discharge.

   b. Settleable material or substances that form sediments which degrade benthic communities or other aquatic life.

   c. Substances which will accumulate to toxic levels in marine waters, sediments or biota.

   d. Substances that significantly decrease the natural light to benthic communities and other marine life.

e. Materials that result in aesthetically undesirable discoloration of the ocean surface.

6. Waste discharged from the IWTP through the SBOO shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in treatment.

7. Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:

   a. Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports.

   b. Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

   c. Maximum protection is provided to the marine environment.

   Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

8. All waste treatment, containment and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.

9. All waste treatment, containment, and disposal facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency 24-hour storm.

10. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Regional Board Executive Officer (hereinafter Executive Officer).

C. RECEIVING WATER LIMITATIONSC. RECEIVING WATER LIMITATIONS

1. The discharge of waste from the IWTP through the SBOO shall not, by itself or jointly with any other discharge, cause violation of the following Ocean Plan ocean water quality objectives. Compliance with the water quality objectives shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed.

   a. Bacterial Characteristics

      (1) Water-Contact Standards

      Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water-contact sports, as determined by the Regional Board, but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column:

      (a) Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

      (b) The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

      The "Initial Dilution Zone" of wastewater outfalls shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards. Kelp beds, for the purpose of the bacterial standards of this permit, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of

Macrocystis and Nereocystis plants throughout the water column.

(2) Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

b. Bacterial Assessment and Remedial Action Requirements

The requirements listed below shall be used to:

(1) Determine the occurrence and extent of any impairment of a beneficial use due to bacterial contamination;

(2) Generate information which can be used in the development of an enterococcus standard; and

(3) Provide the basis for remedial actions necessary to minimize or eliminate any impairment of a beneficial use.

Measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliforms are required. In addition to the requirements of Receiving Water Limitation C.1.a of this Order, if a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period, the Regional Board may require the discharger to conduct or participate in a survey to determine the source of the contamination. The geometric mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval. When a sanitary survey identifies a controllable source of indicator organisms associated with a discharge of sewage, the Regional Board may require the discharger and any other responsible parties identified by the Regional Board to take action to control the source.

c. Physical Characteristics

(1) Floating particulates and grease and oil shall not be visible.

(2) The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

(3) Natural light shall not be significantly reduced at any point outside the initial dilution zone as a result of the discharge of waste.

(4) The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

d. Chemical Characteristics

(1) The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen-demanding waste materials.

(2) The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

(3) The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

(4) The concentration of substances, set forth in Receiving Water Limitation C.3 of this Order, in marine sediments shall not be increased to levels which would degrade indigenous biota.

(5) The concentration of organic materials in marine sediments shall not be increased to levels which would degrade marine life.

(6) Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

e. Biological Characteristics

(1) Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

(2) The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

(3) The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

f. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

2. The discharge of waste from the IWTP shall not, by itself or jointly with any other discharge, cause violation of the following Basin Plan ocean water quality objectives:

a. The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

b. The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally.

3. Toxic Materials

The discharge from the IWTP through the SBOO shall not by itself or jointly with any other discharge, cause the following Ocean Plan water quality objectives to be exceeded in the receiving water upon completion of initial dilution, except that limitations indicated for radioactivity shall apply directly to the undiluted waste effluent.

a. Water Quality Objectives for the Protection of Marine Aquatic Life

Constituent/Property	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
arsenic	ug/l	8	32	80
cadmium	ug/l	1	4	10
chromium (hexavalent)	ug/l	2	8	20

Constituent/Property	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
copper	ug/l	3	12	30
lead	ug/l	2	8	20
mercury	ug/l	0.04	0.16	0.4
nickel	ug/l	5	20	50
selenium	ug/l	15	60	150
silver	ug/l	0.7	2.8	7
zinc	ug/l	20	80	200
cyanide	ug/l	1	4	10
total chlorine residual	ug/l	2	8	60
ammonia (as N)	ug/l	600	2,400	6,000
chronic toxicity	TUc	---	1	---
phenolic compounds (non-chlorinated)	ug/l	30	120	300
chlorinated phenolics	ug/l	1	4	10
endosulfan[1]	ng/l	9	18	27
endrin	ng/l	2	4	6
HCH[2]	ng/l	4	8	12
radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 32069 of the California Code of Regulations.			

b. Water Quality Objectives for the Protection of Human Health -- Noncarcinogens

Constituent/Property	Units	30-Day Average
acrolein	ug/l	220
antimony	mg/l	1.2
bis(2-chloroethoxy)methane	ug/l	4.4
bis(2-chloroisopropyl)ether	mg/l	1.2
chlorobenzene	ug/l	570
chromium (III)	mg/l	190
di-n-butyl phthalate	mg/l	3.5
dichlorobenzenes[3]	mg/l	5.1
1,1-dichloroethylene	mg/l	7.1
diethyl phthalate	mg/l	33
dimethyl phthalate	mg/l	820
4,6-dinitro-2-methylphenol	ug/l	220
2,4-dinitrophenol	ug/l	4.0
ethylbenzene	mg/l	4.1
fluoranthene	ug/l	15
hexachlorocyclopentadiene	ug/l	58
isophorone	mg/l	150
nitrobenzene	ug/l	4.9
thallium	ug/l	14
toluene	mg/l	85
1,1,2,2-tetrachloroethane	mg/l	1.2
tributyltin	ng/l	1.4
1,1,1-trichloroethane	mg/l	540
1,1,2-trichloroethane	mg/l	43

c. Water Quality Objectives for the Protection of Human Health -- Carcinogens

Constituent/Property	Units	30-Day Average
acrylonitrile	ug/l	0.10
aldrin	ng/l	0.022
benzene	ug/l	5.9
benzidine	ng/l	0.069
beryllium	ng/l	33
bis(2-chloroethyl)ether	ug/l	0.045
bis(2-ethylhexyl)phthalate	ug/l	3.5
carbon tetrachloride	ug/l	0.90
chlordane[4]	ng/l	0.023
chloroform	mg/l	0.13
DDT[5]	ng/l	0.17
1,4-dichlorobenzene	ug/l	18
3,3-dichlorobenzidine	ng/l	8.1
1,2-dichloroethane	mg/l	0.13
dichloromethane	mg/l	0.45
1,3-dichloropropene	ug/l	8.9
dieldrin	ng/l	0.040
2,4-dinitrotoluene	ug/l	2.6
1,2-diphenylhydrazine	ug/l	0.16
halomethanes[6]	mg/l	0.13
heptachlor[7]	ng/l	0.72
hexachlorobenzene	ng/l	0.21

Constituent/Property	Units	30-Day Average
hexachlorobutadiene	ug/l	14
hexachloroethane	ug/l	2.5
N-nitrosodimethylamine	ug/l	7.3
N-nitrosodiphenylamine	ug/l	2.5
PAHs[8]	ng/l	8.8
PCBs[9]	ng/l	0.019
TCDD equivalents[10]	pg/l	0.0039
tetrachloroethylene	ug/l	99
toxaphene	ng/l	0.21
trichloroethylene	ug/l	27
2,4,6-trichlorophenol	ug/l	0.29
vinyl chloride	ug/l	36

mg/l = milligrams per liter
ug/l = micrograms per liter
ng/l = nanograms per liter
pg/l = picograms per liter
TUc = toxic units chronic

D. STANDARD PROVISIONSD. STANDARD PROVISIONS

1. The following sections of 40 CFR are attached hereto and incorporated into this permit by reference (Attachment 4):

   a. 122.5 *Effect of a permit*.

   b. 122.21 *Application for a permit.*

   c. 122.22 *Signatories to permit applications and reports*.

   d. 122.41 *Conditions applicable to all permits*.

   e. 122.61 *Transfer of permits*.

   f. 122.62 *Modification or revocation of permits*.

   g. 122.63 *Minor modifications of permits*.

   h. 122.64 *Termination of permits.*

2. *Review and revision of permit*: Upon application by any affected person, or on its own motion, the Regional Board may review and revise this Order. [CWC 13263(e)]

3. *Termination or modification of permit*: This permit may be terminated or modified for cause, including, but not limited to, all of the following:

   a. Violation of any condition contained in this permit.

   b. Obtaining this permit by misrepresentation, or failure to disclose fully all relevant facts.

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge. [CWC 13381]

4. *Material change*: The discharger shall file a new Report of Waste Discharge not less than 180 days prior to any material change in the character, location, or volume of the waste discharge, including, but not limited to, the following:

   a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an

industrial facility resulting in a change in the character of the waste.

b. Significant change in disposal method, e.g., change from land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

c. Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.

d. Increase in flow beyond that specified in the waste discharge requirements.

e. Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CWC 13372, 13376, and 13264, 23 CCR 2210]

5. *Transfers*: When this permit is transferred to a new owner or operator, such requirements as may be necessary under the California Water Code may be incorporated into this permit. (Also see 40 CFR 122.41(l)(3) and 122.61.)

6. *Conditions not stayed*: The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

7. *Interim limitations*: The discharger shall comply with any interim effluent limitations which are in effect as a result of modification of this permit or as a result of any Regional Board or USEPA enforcement action.

8. *Monitoring and Reporting Program*: The discharger shall conduct monitoring and submit reports in accordance with this Order and Monitoring and Reporting Program (MRP) No. 96-50. Monitoring results shall be reported at the intervals specified in this Order and MRP No. 96-50. [CWC 13267 and 13383, 23 CCR 2230, 40 CFR 122.43(a), 122.44(i), and 122.48]

9. *Availability*: A copy of this Order shall be posted at a prominent location at or near the treatment and disposal facilities and shall be available to operating personnel at all times.

10. *Duty to minimize or correct adverse impacts*: The discharger shall take all

reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

11. *Immediate notification and posting*: Whenever a receiving water sample is found to contain levels of bacteria which exceed water-contact standards for bacterial characteristics specified in this Order, the discharger shall immediately notify the County of San Diego, Department of Environmental Health and post signs, at the direction of the Department of Environmental Health, prohibiting body contact with water in all areas affected by the contamination.

12. *Twenty-four hour reporting*: In accordance with 40 CFR 122.41(l)(6)(ii)(C), the discharger shall report violation of any maximum daily effluent limitation specified in this Order to the Regional Board within 24 hours. [40 CFR 122.44(g)]

    In addition, the discharger shall report the following to the Regional Board within 24 hours:

    a. Any violation of any effluent limitation for acute toxicity specified in this Order.

    b. Any violation of any prohibition of this Order.

    c. Any finding of levels of bacteria in a receiving water sample which exceed water-contact standards for bacterial characteristics specified in this Order. [CWC 13267 and 13383]

13. *Reports and notifications*: The discharger shall submit reports and provide notifications to the Regional Board and other agencies as specified in this Order. These other agencies include USEPA, SWRCB, and County of San Diego, Department of Environmental Health. Reports shall be submitted and notifications shall be made to:

    a. Surface Water Unit
    California Regional Water Quality Control Board, San Diego Region
    9771 Clairemont Mesa Boulevard, Suite A
    San Diego, CA 92124-1331
    Phone - (619) 467-2952
    Fax - (619) 571-6972

    b. Regional Administrator

U. S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

c. Regulatory Unit
Division of Water Quality
State Water Resources Control Board
P. O. Box 944213
Sacramento, CA 94244-2130

d. Department of Environmental Health
County of San Diego
P. O. Box 85261
San Diego, CA 92138-5261
Phone - (619) 338-2222
Fax - (619) 338-2174

14. *Responsibilities, liabilities, legal action, penalties*: The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the Clean Water Act. [CWC 13385 and 13387]

Nothing in this Order shall be construed to protect the discharger from its liabilities under federal, state, or local laws.

Except as provided for in 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the CWA.

15. *Noncompliance*: Any noncompliance with this Order constitutes violation of the California Water Code and is grounds for denial of an application for permit modification. [Also see 40 CFR 122.41(a).]

16. *Discharge is a privilege*: No discharge of waste into waters of the State, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the State are privileges, not rights. [CWC 13263(g)]

17. *Effective date*: This Order shall become effective ten days after the date of its adoption provided the USEPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

18. *Expiration*: This NPDES permit expires on October 10, 2001. [40 CFR 122.43, 122.44(h), and 122.46]

19. *Continuation of expired permit*: After this permit expires, the terms and conditions of this permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits are complied with. [40 CFR 122.6, 23 CCR 2235.4]

20. *Applications*: Any application submitted by the discharger for reissuance or modification of this permit shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the California Water Code and the California Code Regulations.

21. *Confidentiality*: Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this permit will be considered confidential, and all such information and documents shall be available for review by the public at the offices of the Regional Board.

22. *Severability*: The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

E. PROVISIONS APPLICABLE TO POTWsE. PROVISIONS APPLICABLE TO POTWs

1. 40 CFR 122.42(b) is attached hereto and incorporated into this permit by reference (Attachment 4).

2. *Plant supervision and operation*: Supervisors and operators of all wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with 23 CCR 3680. [23 CCR 2233(d)(1)]

3. *Operation and maintenance manual*: Each wastewater treatment facility shall be operated and maintained in accordance with the operation and maintenance manual prepared by the owner of the treatment facility through the Clean Water Grant Program. [23 CCR 2233(d)(2)]

4. *New and expanded treatment facilities*: All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and re-rating of an existing treatment facility. For new treatment facilities and expansions, the certification report shall be prepared by the design engineer. For re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility capacity. The certification report shall:

   a. Identify the design capacity of the treatment facility;

   b. Certify the adequacy of each component of the treatment facility; and

   c. Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of how the process and physical design of the facility will ensure compliance with this Order.

   The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. The certification report, should, if possible, be submitted prior to beginning construction. The discharger shall not initiate a discharge from a new treatment facility or initiate a discharge from an existing treatment facility at a 30-day average dry weather flowrate in excess of its design capacity until:

   a. The certification report is received by the Executive Officer;

b. The Executive Officer has received written notification of the completion of construction (new treatment facilities and expansions only);

c. An inspection of the plant has been made by the Regional Board staff (new treatment facilities and expansions only); and

d. The Executive Officer has provided the discharger with written authorization to discharge at a 30-day average dry weather flowrate not to exceed the revised design capacity.

5. SANITARY SEWER OVERFLOW REPORTING

a. For the purpose of this Order, a sanitary sewer overflow is any discharge of treated or untreated wastewater at a location not authorized by waste discharge requirements and/or NPDES permit which results from a pump station failure, sewer line break, obstruction, surcharge, or any other circumstance. All sanitary sewer overflow events from Mexico's sewage collection system or from IBWC's waste collection, treatment, containment, or disposal facilities shall be reported to the Regional Board, City of San Diego, City of Imperial Beach, City of Coronado, and the County of San Diego Department of Environmental Health if the discharge occurs in the United States or threatens waters of the state. Sanitary sewer overflow events from Mexico's collection system shall be reported to the best of IBWC's knowledge. IBWC shall contact the City of San Diego, City of Imperial Beach, City of Coronado, and the County of San Diego Department of Environmental Health by January 15, 1997 and make arrangements for reporting sanitary sewer overflows.

b. For the purpose of this Order, surface waters include Waters of the United States as defined in 40 CFR 122.2 such as navigable waters, rivers, streams (including ephemeral streams), lakes, playa lakes, natural ponds, bays, the Pacific Ocean, lagoons, estuaries, man-made canals, ditches, dry arroyos, mudflats, sandflats, wet meadows, wetlands, swamps, marshes, sloughs and water courses. Sanitary sewer overflows to storm drains tributary to Waters of the United States shall be reported as discharges to surface waters.

c. If the sanitary sewer overflow event results in a discharge of 1,000 gallons or more to surface waters the discharger shall:

i) Report the sanitary sewer overflow event to the Regional Board by telephone, by voice mail, or by FAX within 24 hours from the time

that 1) discharger has knowledge of the sanitary sewage overflow, 2) notification is possible, and 3) notification can be provided without substantially impeding cleanup or other emergency measures. Regional Board office hours are between the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding state holidays. Regional Board voice mail and Fax machine are on-line 24 hours a day, 7 days a week.

ii) The information reported to the Regional Board in the initial telephone or FAX report shall include the name and phone number of the person reporting the sanitary sewer overflow, the responsible sanitary sewer system agency, the estimated total sewer overflow volume, the location, the receiving waters, whether or not the sewer overflow is still occurring at the time of the report, and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

iii) Report the sanitary sewer overflow to the Office of Emergency Services (OES) in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550
Use the Fax for follow-up only.
Fax (916) 262-1677

iv) Complete the Sanitary Sewer Overflow Report Form. (Attachment 5)

v) Submit the completed sanitary sewer overflow report form along with additional correspondence to the Regional Board no later than 5 days following the starting date of the sanitary sewer overflow. Additional correspondence and follow-up reports should be submitted, as necessary, to supplement the Sanitary Sewer Overflow Report Form to provide detailed information on cause, response, adverse effects, corrective actions, preventative measures, or other information.

vi) Enter the data on a computer disk in the format described below for submission to the Regional Board at the end of the quarter.

d. If the sanitary sewer overflow does not result in a discharge to surface waters or is less than 1,000 gallons in volume, the discharger shall:

i) Not be required to report the sanitary sewer overflow to the Regional Board by telephone, by voice mail, or by FAX within 24 hours.

ii) Enter the data on a computer disk in the format described below for submission to the Regional Board at the end of the quarter.

6. SANITARY SEWER OVERFLOW QUARTERLY SUMMARY REPORTS

a. An IBM-PC DOS compatible floppy disk containing the data described below on all sanitary sewer overflows for the quarter shall be submitted quarterly with a certification statement described in 40 CFR Part 122.22 (see Attachment 4). The disk shall be labeled with the discharger's name, Order No. 96-50, the quarter, the year, and the software format. The disk shall be 3 1/2 inch, double sided, high density formatted for 1.44 MB. The information submitted shall be fully compatible with Microsoft EXCEL version 5.0. In order to safeguard the integrity of the information submitted on disk against errors caused by accidental changes, all information should be write protected. This can be done with Microsoft EXCEL version 5.0 by choosing "Protection" from the Tools Menu, and choosing "Protect Sheet". If more than one sheet is created, protect every sheet with the same password. Any form of data protection may be used which will allow Regional Board staff to open the file and copy the data to a new file. This procedure will safeguard the integrity of information submitted on computer disk to the Regional Board. An EXCEL template of the database will be supplied upon request.

Each sanitary sewer overflow shall be reported in a separate record in the file. Nonnumeric Data shall be entered in capital and lower case letters.

The required fields for each record shall be as follows:

Field No.	Description	Excel Format Code	Length
1.	Sanitary Sewer Overflow Sequential Tracking Number. This number shall be assigned by each sanitary sewer collection agency for each sanitary sewer overflow. The first 3 digits will represent the State fiscal year from July through June. The next 3 digits will represent a unique sequential number assigned to each overflow. The first overflow for each agency in the 1996-97 fiscal year will be number 967001. The second overflow for each agency in the 1996-97 fiscal year will be number 967002.	General	6
2.	If reported, name of the Regional Board staff contact who was notified of the sanitary sewer overflow or one of the following terms: VOICE MAIL and PHONE NUMBER, OR FAX.	General	20
3.	If reported, date and time reported to the Regional Board by phone or FAX.(MM/DD/YY HH:MM in military or 24 hour time)	Date/ Time	14
4.	Name of a contact at the responsible sewer agency who has more information on the sanitary sewer overflow.	General	20
5.	Phone number where responsible sewer agency contact can be reached. Enter the area code and seven digits without separating parentheses or dashes. ((###)###-####)	Custom	10
6.	Name of responsible sewer agency.	General	30
7.	Sanitary sewer overflow start date and time, estimated if necessary. (MM/DD/YY HH:MM in military or 24 hour time)	Date/ Time	14
8.	Sanitary sewer overflow end date and time.	Date/	14

Field No.	Description	Excel Format Code	Length
	(MM/DD/YY HH:MM in military or 24 hour time)	Time	
9.	Total sanitary sewer overflow volume from the overflow start time to the overflow end time. (gallons)	General	13
10.	Volume of sewage recovered by the discharger. (gallons)	General	13
11.	Sanitary Sewer Overflow Location-- Street Address	General	30
12.	Sanitary Sewer Overflow Location--City	General	16
13.	Sanitary Sewer Overflow Location--County SD for San Diego RV for Riverside OR for Orange	General	2
14.	Sanitary Sewer Overflow Location--Zip Code	General	9
15.	Sanitary Sewer Overflow Structure I.D. (Type of structure where overflow occurred or which caused overflow.)	General	30
16.	Number of Sanitary Sewer Overflows, including the current Overflow, at this location in the past 12 months running. The first spill at a location is number 1.	General	3
17.	Sanitary Sewer Overflow Cause-- Short Description Use one of the following terms: Roots, Grease, Line Break, Infiltration, Rocks, Debris, Blockage, Vandalism, Flood Damage, Manhole Failure, Pump Station Failure, Power Failure, Construction, Other.	General	20
18.	Sanitary Sewer Overflow Cause -- Detailed Description of the cause.	General	248

Field No.	Description	Excel Format Code	Length
19.	Sanitary Sewer Overflow Correction -- Description of all preventive and corrective measures taken or planned.	General	248
20.	Did the Sanitary Sewer Overflow reach surface waters? (Y or N)	General	1
21.	Did the Sanitary Sewer Overflow enter a storm drain? (Y or N)	General	1
22.	Name or description of the initial receiving water. The initial receiving water is the surface water body which the sewage reaches first. This initial receiving water is the first bay, ocean, downstream canyon, or blue line stream shown on a USGS topographic map for the area of the discharge. All water body names must be spelled out. Abbreviations are not acceptable. If the sewage went to a storm drain, enter the name of the water body downstream of the storm drain. (If none, enter none)	General	30
23.	Name or description of the secondary receiving water(s). The secondary receiving water is the surface water(s) which the sewage reaches after the initial receiving water. This secondary receiving water is the bay, ocean, downstream canyon, or blue line stream shown on a USGS topographic map which the sewage reaches after the initial receiving water. All water body names must be spelled out. Abbreviations are not acceptable. (If none, enter none)	General	30
24.	If the sanitary sewer overflow <u>did not</u> reach surface waters, describe the final destination of the sewage.	General	30
25.	Was the local health services agency	General	1

Field No.	Description	Excel Format Code	Length
	notified? (Y or N)		
26.	If the overflow to surface water was greater than or equal to 1,000 gallons, was the Office of Emergency Services (OES) notified? (Y or N) (If not applicable, enter NA)	General	2
27.	Were signs posted to warn of contamination? (Y or N)	General	1
28.	How many days were the warning signs posted?	General	3
29.	Remarks	General	90

b. A statement certifying that there were no sanitary sewer overflows for the quarter and the certification statement described in 40 CFR Part 122.22 (see Attachment 4) may be submitted in lieu of a floppy disk.

7. SANITARY SEWER OVERFLOW SUMMARY REPORT SCHEDULE

a. Sanitary Sewer Overflow Summary Reports and certification statements shall be submitted to the Executive Officer in accordance with the following schedule:

Reporting Frequency	Report Period	Report Due
Quarterly	January - March	April 30
	April - June	July 30
	July - September	October 30
	October - December	January 30

The first quarterly summary report will be due April 30, 1997, for January - March, 1997. Reports will be due quarterly thereafter.

8. SANITARY SEWER OVERFLOW PREVENTION PLAN

No later than six months after the adoption of this order, the discharger shall

develop and implement a Sanitary Sewer Overflow Prevention Plan (SSOPP). The SSOPP shall be designed to prevent, or minimize the potential for sanitary sewer overflows from facilities in the United States. The discharger shall maintain the SSOPP in an up-to-date condition and shall amend the SSOPP whenever there is a change (e.g. in the design, construction, operation, or maintenance of the sanitary sewer system or sewer facilities) which materially affects the potential for sanitary sewer overflows. The discharger shall review and amend the SSOPP as appropriate after each sanitary sewer overflow. The discharger shall submit the SSOPP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The SSOPP and any amendments thereto shall be modified as necessary at the direction of the Executive Officer. The discharger shall ensure that the up-to-date SSOPP is readily available to sewer system personnel at all times and that sewer system personnel are familiar with it.

9. SANITARY SEWER OVERFLOW RESPONSE PLAN

No later than six months after adoption of this order, the discharger shall develop and implement a Sanitary Sewer Overflow Response Plan (SSORP). The SSORP shall establish procedures for responding to sanitary sewer overflows from the IWTP facilities or Mexican facilities which threaten the waters of the state so as to (a) minimize the sewer overflow volume which enters surface waters, and (b) minimize the adverse effects of sewer overflows on water quality and beneficial uses. For discharges from Mexican facilities, the SSORP shall include a plan to coordinate with the appropriate Mexican officials. The SSORP shall include a posting plan, in which any posting of areas contaminated with sewage is performed at the direction of the local health services agency. The discharger shall maintain the SSORP in an up-to-date condition and shall amend the SSORP as necessary to accomplish these objectives. The discharger shall review and amend the SSORP as appropriate after each sanitary sewer overflow. The discharger shall submit the SSORP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The SSORP and any amendments thereto shall be modified as necessary at the direction of the Executive Officer. The discharger shall ensure that the up-to-date SSORP is readily available to sewer system personnel at all times and that sewer system personnel are familiar with it.

10. *Reclamation planning*: Pursuant to SWRCB Order No. WQ 84-7, the discharger shall submit, by May 15, 1997 and with its Report of Waste Discharge for reissuance of this NPDES permit, a complete reclamation report including sufficient information to justify why any effluent proposed to be discharged to the ocean is not being reclaimed for beneficial use.

11. *Ensuring adequate capacity:* The discharger shall submit a written report to the Executive Officer within 90 days after the average dry weather influent flowrate for any 30-day period equals or exceeds 75 percent of the design capacity of any waste treatment and/or disposal facilities. The discharger's senior administrative officer shall sign a letter which transmits that report and certifies that the policy-making body is adequately informed about it. The report shall include:

    a. Average daily flow for the 30-day period, the date on which the largest instantaneous peak flow occurred, the rate of that peak flow, and the total flow for that day.

    b. The discharger's best estimate of when the average daily dry weather flowrate will equal or exceed the design capacity of the facilities.

    c. The discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the waste treatment and/or disposal facilities and/or control the flowrate before the waste flowrate equals the capacity of present units.

12. *Sewage sludge*: The discharger shall comply with all federal and state laws, regulations, and requirements that apply to its sewage sludge handling, use, and disposal practice(s) in the United States. [40 CFR 122.44(b)(2) and 122.44(o)]

F. COMPLIANCE DETERMINATIONF. COMPLIANCE DETERMINATION

1. If only one sample is collected during the time period associated with the effluent limitations (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period. [OP IV.A]

2. All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Sufficient sampling and analysis shall be conducted to determine compliance. [OP IV.B]

3. Compliance based on a single sample analysis should be determined where appropriate as described below.

    a. When a calculated effluent limitation is greater than or equal to the PQL (defined below), compliance shall be determined based on the calculated effluent limitation and either single or multiple sample analyses.

    b. When the calculated effluent limitation is below the PQL, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.

    c. When the calculated effluent limitation is below the PQL and recurrent analytical responses between the PQL and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples. [OP IV.B]

4. Published values for MDLs (defined below) and PQLs should be used except where revised MDLs and PQLs are available from recent laboratory performance evaluations, in which case the revised MDLs and PQLs should be used. Where published values are not available, the Executive Officer will determine appropriate values based on available information, including information submitted by the discharger upon request of the Executive Officer. [OP IV.B]

    a. The Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136 Appendix B. [OP Appendix I]

b. The Practical Quantitation Level (PQL) is the lowest concentration of a substance which can be consistently determined within +/-20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL for carcinogens is the MDL x 5, and for noncarcinogens is the MDL x 10. [OP Appendix I]

5. When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs) concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL for that parameter. [OP IV.B]

6. The 6-month median effluent concentration limitation shall apply as a moving median of daily values for any 180-day period in which daily values represent flow-weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred. [OP IV.A] The 6-month median receiving water limitation shall apply as a moving median of daily values for any 180-day period.

7. The 30-day average effluent limitation shall be the moving arithmetic mean of daily concentrations over the specified 30-day period.

8. The 7-day average shall be the moving arithmetic mean of daily concentrations over the specified 7-day period.

9. The daily maximum effluent limitation shall apply to flow weighted 24-hour composite samples. [OP IV.A] The daily maximum receiving water limitation shall apply to grab sample determinations.

10. The instantaneous maximum effluent limitation shall apply to grab sample determinations. [OP IV.A] The instantaneous maximum receiving water limitation shall apply to grab sample determinations.

11. The mass emission rate (MER), in pounds per day, shall be obtained from the following calculation for any calendar day:

$$\text{mass emission rate (lb/day)} = 8.34 \times Q \times C$$

in which Q and C are the flow rate in MGD and the constituent concentration in mg/l, respectively, and 8.34 is a conversion factor. If a composite sample is taken, then C is the concentration measured in the composite sample and Q is

the average flow rate occurring during the period over which the samples are composited.

12. The discharger shall conduct monthly acute whole effluent toxicity (WET) tests on 24-hour composite effluent samples. Samples shall be taken at the NPDES sampling location.

a. Test Species and Methods

The discharger shall conduct tests with the following vertebrate and invertebrate species for the first three suites of tests. After this screening period, monitoring shall be conducted with the most sensitive species.

(1) Vertebrate: Fathead minnow, Pimephales promelas.

(2) Invertebrate: Water flea, Ceriodaphnia dubia.

Every year, the discharger shall re-screen, at different times from the prior year(s) and continue to monitor with the most sensitive species.

For Ceriodaphnia dubia, the presence of acute toxicity shall be estimated using a 48-hour static test, as specified in Methods for Estimating the Acute Toxicity of Effluents to Freshwater and Marine Organisms, (EPA/600/4-90/027F, 1993). For Pimephales promelas, the presence of acute toxicity shall be estimated using a 96-hour static test, as specified in Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms (EPA-600/4-85-013, 1985).

b. Definition of Acute Toxicity

Effluent acute toxicity is generally measured using a multi-concentration, or definitive test, consisting of a control and a minimum of five effluent concentrations. The tests are designed to provide dose-response information, expressed as the percent effluent concentration that is lethal to 50 percent of the test organisms (LC50) within 96 hours, or the highest effluent concentration in which survival is not statistically significant from the control. Test results shall be reported in TUa, where TUa = 100/LC50 [see Discharge Specification B.1.a(2) for TUa effluent limitations].

When it is not possible to measure the 96-hour LC50 due to greater than 50% survival of the test species in 100% waste, the toxicity concentration shall be calculated by the following:

$$TUa = \frac{\log (100 - S)}{1.7}$$

where S is the percentage survival in 100% waste. If S > 99, TUa shall be reported as zero. [OP Appendixes I & II]

c. Quality Assurance

Concurrent testing with reference toxicants shall be conducted.

If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the discharger must re-sample and re-test as soon as possible.

Control and dilution water should be receiving water or lab water, as appropriate. If the dilution water is different from the culture water, then culture water should be used in a second control.

13. The discharger shall conduct monthly chronic WET tests on 24-hour composite effluent samples. Samples shall be taken at the NPDES sampling location.

a. Test Species and Methods

The discharger shall conduct tests with the following vertebrate, invertebrate, and alga species for the first three suites of tests. After this screening period, monitoring shall be conducted using the most sensitive species.

(1) Vertebrate: Inland silverside, Menidia beryllina (survival and growth)/topsmelt, Atherinops affinis (survival and growth).

(2) Invertebrate: Red abalone, Haliotis rufescens (larval development test).

(3) Alga: Giant kelp, Macrocystis pyrifera (germination and germ-tube length test).

Every year, the discharger shall re-screen, at different times from the prior year(s) and continue to monitor with the most sensitive species.

The presence of chronic toxicity shall be estimated as specified in Short-

Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA/600/4-87/028, 1988), Experimental Evaluation of Effluent Toxicity Testing Protocols with Giant Kelp, Mysids, Red Abalone, and Topsmelt (SWRCB, 1989), and/or Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA/600/R-95-136).

b. Definition of Chronic Toxicity

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Test results shall be reported in TUc, where 100 TUc = 100/NOEC. The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test, that causes no observable adverse effect on the test organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significant different from the controls).

c. Quality Assurance

A series of five dilutions and a control will be tested. The series shall include the instream waste concentration (IWC), two dilutions above the IWC, and two dilutions below the IWC (e.g., 12.5, 25, 50, 75 and 100 percent effluent, where IWC = 50). The IWC for this discharge is 1.0 percent effluent.

Concurrent testing with reference toxicants shall be conducted.

If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the discharger must re-sample and re-test as soon as possible.

Control and dilution water should be receiving water or lab water, as appropriate. If the dilution water is different from the culture water, then culture water should be used in a second control.

14. No later than six months after adoption of this Order, the discharger shall develop a Toxicity Reduction Evaluation (TRE) workplan in accordance with USEPA's Toxicity Reduction Evaluation Procedures: Phases 1, 2, and 3, (USEPA document Nos. USEPA 600/3-88/034, 600/3-88/035 and 600/3-88/036,

respectively), and TRE Protocol for Municipal Wastewater Treatment Plants (USEPA 600/2-88/062). The TRE workplan shall be subject to the approval of the Executive Officer and shall be modified as directed by the Executive Officer. The discharger shall submit the TRE workplan to the Executive Officer upon request of the Executive Officer.

If toxicity testing results show a violation of any acute or chronic toxicity limitation identified in Discharge Specification B.2. of this Order, the discharger shall:

a. Take all reasonable measures necessary to immediately minimize toxicity; and

b. Increase the frequency of the toxicity test(s) which showed a violation to at least two times per month until the results of at least two consecutive toxicity tests do not show violations.

If the Executive Officer determines that toxicity testing shows consistent violation of any acute or chronic toxicity limitation identified in Discharge Specification B.2. of this Order, the discharger shall conduct a TRE which includes all reasonable steps to identify the source of toxicity. Once the source of toxicity is identified, the discharger shall take all reasonable steps to reduce the toxicity to meet the toxicity limitations identified in Discharge Specification B.2. of this Order.

Within fourteen days of completion of the TRE, the discharger shall submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations of this Order and prevent recurrence of violations of those limitations, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer. [OP IV.C]

15. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN (most probable number). The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Regional Board to be appropriate. [OP Appendix II]

16. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times ... \times C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 ml) found on each day of sampling.

17. Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Board. [OP Appendix I]

G. PRETREATMENT REQUIREMENTSG. PRETREATMENT REQUIREMENTS

1. In consultation with the Government of Mexico, the discharger shall develop and implement mass emission rate and concentration limitations for the influent to the IWTP (influent limitations) for pollutants that may cause or contribute to interference, pass through or the other problems described at 40 CFR 403.5. The influent limits shall prevent violations of the California Ocean Plan and this Order.

2. The influent limitations shall be determined for the following two treatment scenarios:

   a. Advanced primary and secondary treatment of sewage; and
   b. Advanced primary treatment only.

3. The development and implementation of the influent limitations must be approved by EPA and the State of California. At a minimum, the following information shall be considered in developing the influent limitations:

   a. Wastewater characteristics -- Monthly average plant operational data from the IWTP and other wastewater monitoring data.

   b. Water quality criteria -- The analysis shall be conducted using the most stringent of the following criteria:

      i. This Order
      ii. The 1990 California Ocean Plan

   c. Inhibition/interference data -- Literature from EPA guidance or other sources.

   d. Process removal data -- If influent and effluent values are available, actual removal rates from operating data at the IWTP shall be calculated. If sufficient data are not available, literature values from the EPA Water Engineering Research Laboratory (WERL) Treatability Database may be used. A mass balance (input-output) approach shall be conducted to convert criteria into allowable headworks loadings. This includes tracing the routes of each pollutant through the treatment process, taking into account pollutant removals in treatment units.

   e. Background data -- Values for domestic/background levels from EPA guidance or other sources.

f. Safety factor -- IBWC shall recommend and evaluate appropriate approaches regarding growth, slug loadings, and data uncertainty.

4. The influent limitations for advanced primary treatment only shall be developed and implemented according to the following schedule:

Task	Duration[1]	Deadline
Submit a project report which, at a minimum, includes the influent limitations, the basis for the influent limitations, a comparison of the influent limitations with the IWTP influent and with any Mexican wastewater quality standards, a sensitivity analysis, and an achievability analysis.	240 days	June 18, 1997
Submit a sampling compliance plan to determine if the IWTP influent is in compliance with the influent limitations. This sampling compliance plan shall meet the minimum requirements described in Section G.0 of this Order. The plan shall be subject to the approval of EPA and the State of California.	30 days	July 15, 1997
Implement the sampling compliance plan.	60 days	September 15, 1997
Begin remedial action to achieve limitations as described in Section G.0 (if required).	180 days	March 20, 1998

[1] approximate calendar days

5. The influent limitations for advanced primary and secondary treatment shall be developed and implemented according to the following schedule:

Task	Duration[1]	Deadline
Initiate development of influent limitations for advanced primary and secondary treatment.		January 30, 1997
Submit a project report which, at a minimum, includes the influent limitations,	545 days	July 30, 1998

Task	Duration[1]	Deadline
the basis for the influent limitations, a comparison of the influent limitations with the IWTP influent and with any Mexican wastewater quality standards, a sensitivity analysis, and an achievability analysis.		
Submit a sampling compliance plan to determine if the IWTP influent is in compliance with the influent limitations. This sampling compliance plan shall meet the minimum requirements described in Section G.0 of this Order. The plan shall be subject to the approval of EPA and the State of California.	30 days	August 31, 1998
Implement the sampling compliance plan.	60 days	October 30, 1998
Begin remedial action to achieve limitations as described in Section G.0 (if required).	180 days	April 30, 1999

[1] approximate calendar days

6. Compliance with the influent limitations shall be evaluated based on flow-proportioned, 24-hour composite samples, or equivalent, taken at a location upstream of any inplant return flows, recycle flows, or the addition of treatment chemicals. A minimum of one sample and analysis each month shall be performed for the pollutants subject to an influent limitation. Sampling and analysis shall begin when the IWTP begins operation and no later than September 15, 1997.

7. An exceedance of an influent limitation shall be a violation of this Order. An actual or projected exceedance of the influent limits shall be regarded as inconsistent with Minute No. 283 of July 2, 1990 and the discharger shall take all actions available under U.S. law and international treaty and agreement, including the environmental side agreements to the North American Free Trade Agreement (NAFTA), to achieve compliance with those limits. If the discharger is unable to achieve compliance with the influent limitations, the discharger shall formally elevate the matter within the U.S. Department of State regarding the reasons for lack of progress and offer strategies for addressing the difficulties. The discharger shall encourage elevated diplomatic attention by the U.S. Department of State to issues that the discharger has been unable to resolve. Similarly, EPA shall elevate discussion within the Office of Water and the Office

of International Activities.

8. By March 30 of each year, the discharger shall submit an annual report to: the Regional Board; USEPA Region 9; and the State Water Resources Control Board, Division of Water Quality, Regulatory Unit; and the San Diego County Department of Health Services, Hazardous Materials Management Division. The report will describe the discharger's pretreatment activities from January 1 through December 31. This report shall contain, but not be limited to, the following information:

   a. A summary of analytical results from sampling required in Section G.0 of this Order; and

   b. A discussion of upset, interference, pass through incidents, or influent limitation exceedances, if any, at the POTW treatment plant which the discharger knows or suspects were caused by industrial users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken including new preventative measures and, if known, the name and address of the industrial user(s) responsible. The discussions shall also include a review of the applicable pollutant limitations to determine whether any additional limitations or changes to existing requirements may be necessary to comply with these pretreatment requirements; and

   c. A description of any changes in sludge disposal methods; and

   d. A description of any significant changes in the influent limitations or implementation plan; and

   e. A discussion of any concerns not described elsewhere in this report.

H. SLUDGE REQUIREMENTSH. SLUDGE REQUIREMENTS

1. General Requirements

   a. The discharger shall comply with all applicable federal regulations (40 CFR 503) for the preparation of sludge generated at the IWTP.

   b. The discharge of sludge from the IWTP in the United States or at a location where the sludge or sludge constituents could be conveyed to the United States by surface or ground water is prohibited.

   c. All sludge generated by the discharger's wastewater treatment facilities shall be removed from the IWTP site within 6 months. Any site in the United States where sludge generated by the discharger is stored for more than two years will be classified by EPA as a surface disposal site pursuant to 40 CFR 503 Subpart C. The discharger must ensure that the operator of any such surface disposal site submits the notification required in 40 CFR 122.21 to EPA 180 days before the site becomes a surface disposal site, and that the site operator begins complying fully with the requirements in 40 CFR 503 Subpart C for surface disposal sites at the two-year start date. If the discharger wants to store sludge for over two years, or allow a contractor to store sludge for over two years, the discharger must submit the information in 40 CFR 503.20(b) to EPA in writing 180 days prior to the date at which the site becomes a surface disposal site.

   d. Inspection and Entry: The discharger shall allow the Regional Administrator or an authorized representative thereof, upon the presentation of credentials, to:

      (1) Enter upon all premises in the United States where sludge from the discharger is treated, stored, reused, or disposed, either by the discharger or by contractor to the discharger;

      (2) Have access to and copy any records that must be kept under the conditions of this permit, either by the discharger or by contractor to the discharger; and

      (3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations based in the United States and used in the treatment, storage, reuse, or disposal of the discharger's sludge, either by the discharger or by contractor to the

discharger.

e. Duty to Mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge handling, use, or disposal which has a likelihood of adversely affecting human health or the environment in the United States.

f. Good management practices will be implemented to minimize production of odors, dust, and vector attraction during sludge treatment, transfer, and storage in the United States.

g. The solids and sludge treatment and storage site in the United States shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, to prevent drainage from the treatment and storage site, and to prevent ground water contamination. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

h. Proper Operation and Maintenance: The discharger shall at all times properly operate and maintain all facilities and systems of sludge treatment and control, including adequate laboratory controls and quality assurance procedures. The discharger shall ensure that any person who takes the discharger's sludge for further treatment in the United States shall also properly operate and maintain their facilities.

2. Monitoring

a. The sludge shall be tested for all pollutants listed under Section 307(a) of the CWA (priority pollutants) and Title 22 CCR and 40 CFR 503 twice per year; and

b. The discharger shall develop a sampling plan for collection of representative samples for monitoring pollutants, pathogens (for land application or surface disposal), and vector attraction reduction (for land application or surface disposal). The plan should include number and location of sampling points. If pathogen reduction is determined by time and temperature, the plan must be designed to determine the representative temperature of the process.

c. Samples of sludge shall be collected according to the procedures for compositing samples outlined in Test Methods for Evaluating Solid Waste

Physical/Chemical Methods (EPA Publication SW-846, Second Edition, as updated). Samples shall be split, and a portion of the sample preserved, in the event that the results show concentrations of waste constituents that exceed 10 times the STLC listed in Title 22 CCR.

d. Results of analyses shall be reported in mg/kg, wet weight (for Title 22 CCR compliance) and 100 percent dry weight (for 40 CFR 503 compliance). If the results indicate that the total concentration of any waste constituent is greater than 10 times the STLC value for the constituent listed in Title 22 CCR, then the discharger shall also perform a Waste Extraction Test on the sludge sample pursuant to Title 22 CCR requirements.

3. Notification of Non-compliance

The discharger shall notify USEPA and the Regional Board of any non-compliance which may seriously endanger health or the environment as soon as possible, but no later than 24 hours from the time the discharger first became aware of the circumstances. A written report shall be submitted to USEPA and the Regional Board within five days. For other instances of non-compliance, the discharger shall notify USEPA and the Regional Board in writing within five working days of becoming aware of the non-compliance.

4. Reporting Requirements

The discharger shall submit an annual report to USEPA and the Regional Board by March 30 of each year for the period from January 1 through December 31. The report shall include:

a. Amount of sludge generated that year at the IWTP, in dry metric tons, and amount of sludge leaving the IWTP; and

b. A description or certification of the ultimate destination of the sludge in Mexico to the best of IBWC's knowledge; and

c. Results of all monitoring required in Sludge Requirements Monitoring, Section H.2 of this Order.

ENDNOTESENDNOTES

1. Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

2. HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

3. Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

4. Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

5. DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

6. Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

7. Heptachlor shall mean the sum of heptachlor and heptachlor epoxide.

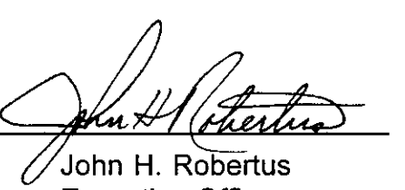
8. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

9. PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

10. TCDD equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

I, John H. Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of Order No. 96-50 adopted by the California Regional Water Quality Control Board, San Diego Region, on November 14, 1996.



John H. Robertus
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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FACT SHEET
for the
INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

NPDES NO. CA0108928

Background

Since the 1930s, raw sewage flowing into the United States from Mexico has posed a serious threat to public health and the environment in the South Bay communities of San Diego. This problem has gradually worsened over the years with the substantial growth of Tijuana's population and industrial sector. Although interim measures by the U.S. and Mexican governments have been effective on a short-term basis, untreated wastewater still flows into the Tijuana River today.

In July 1990, the U.S. and Mexico agreed to build an International Wastewater Treatment Plant (IWTP) on the U.S. side of the border as part of a regional solution. The IWTP will treat sewage flows that exceed the capacity of the existing Tijuana sewage conveyance and treatment system.

The IWTP is being constructed in phases. The South Bay Land Outfall was completed in March 1994. The advanced primary treatment phase of the IWTP is scheduled to be completed in December 1996, the South Bay Ocean Outfall (SBOO) is scheduled to be completed in June 1998, and the secondary treatment phase of the IWTP is scheduled to be completed by December 31, 2000.

On May 24, 1996, the International Boundary and Water Commission, United States Section (IBWC) submitted an application to the California Regional Water Quality Control Board, San Diego Region (Regional Board) for an NPDES permit for the discharge of treated wastewater to the Pacific Ocean through the South Bay Ocean Outfall. The application is for a discharge of up to 25 million gallons per day (MGD)

secondary effluent from the IWTP to the SBOO.

The Regional Board is proposing to issue Tentative Order No. 96-50, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0108928, for a discharge of waste to surface waters in the San Diego Region from the International Boundary and Water Commission, U.S. Section, International Wastewater Treatment Plant.

The IWTP may begin primary treatment of sewage in January, 1997. If the IWTP is placed into operation prior to the completion of the SBOO, current plans are to discharge advanced primary treated effluent to the Emergency Connection to the City of San Diego's Metropolitan Sewerage System (which connects to the Point Loma Metropolitan Wastewater Treatment Plant), or to the proposed new Mexican conveyance system which will connect to the San Antonio de los Buenos Treatment Plant. However, discharge of advanced primary treated effluent to the Tijuana River may be necessary if Mexican sewage flows exceed the combined capacity of the Emergency Connection and the existing Mexican conveyance system. Such a discharge to the Tijuana River would not comply with water quality standards for the receiving waters. Additionally, advanced primary treated effluent is planned to be discharged to the Pacific Ocean during the period between completion of the SBOO and completion of the secondary treatment phase of the IWTP, in conflict with the Federal Clean Water Act. For these reasons, the Regional Board is proposing to issue a cease and desist order (Tentative Cease and Desist Order No. 96-52) to impose a time schedule for the completion of secondary treatment facilities, and to address discharges to surface waters from the IWTP that may occur prior to completion of secondary treatment facilities.

Institutional Arrangements

Many institutions are involved in the planning, funding, construction, operation, and maintenance of the IWTP project including the SBOO and other facilities. Tentative Order No. 96-50 and Tentative Cease and Desist Order No. 96-52 will be issued to the IBWC. Although the IBWC is hiring a contractor to operate the IWTP, the IBWC will be held responsible for any violations of these orders. The United States Environmental Protection Agency has been responsible for planning and providing the majority of the funding for the IWTP project. Other funding sources for the project are the City of San Diego, the State of California, and the government of Mexico. The IBWC and Mexico are currently negotiating an agreement regarding operations and maintenance of the IWTP. The operations and maintenance agreement will include a division of funding between the United States and Mexico and an operational plan which portions future sewage flows between the IWTP and Mexican facilities. Under IBWC Treaty Minute No. 283, Mexico will require industries to provide appropriate pretreatment and will be responsible for transportation and disposal of the sludge from the IWTP.

Service Area

The International Wastewater Treatment Plant (IWTP) service area is located in eastern Tijuana, Mexico. The IWTP will treat up to 25 million gallons per day (MGD) of sewage from Tijuana with most of the remaining sewage being transported to Mexico's treatment plant. It is likely that there will be some renegade sewage flows in the Tijuana River even after the IWTP begins operation. During dry weather, most of these renegade sewage flows can be captured with the diversion structure in the Tijuana River and returned to the collection system. Wastewater treated at the IWTP will be discharged to the South Bay Ocean Outfall (SBOO).

Treatment Facility and Outfall Description

The IWTP is located at 2415 Dairy Mart Road in San Diego, adjacent to the Tijuana River and the International Border. Attachment 1 shows the location of the IWTP.

The applications states that wastewater treatment operations and processes at the IWTP will be screening, grit removal, chemically assisted sedimentation, activated sludge aeration, and secondary sedimentation. Facilities to chlorinate and dechlorinate the effluent as necessary are also planned at the IWTP. Treated wastewater will be discharged to the Pacific Ocean through the South Bay Land Outfall followed by the South Bay Ocean Outfall. Sludge will be thickened using dissolved air floatation, stabilized and pasteurized with lime, and dewatered using belt filter presses. Dewatered sludge will be trucked to Mexico.

The secondary treatment design capacity of the IWTP is 25 MGD with no peaking factor. The advanced primary treatment design capacity of the IWTP is an average flowrate of 25 MGD with a peak flowrate of 75 MGD.

South Bay Land Outfall extends 12,300 feet from the IWTP to the mouth of Goat Canyon to the South Bay Ocean Outfall.

The South Bay Ocean Outfall will extend 23,600 feet from the South Bay Land Outfall in a westerly direction from near the mouth of the Tijuana River. The South Bay Ocean Outfall will consist of a vertical drop shaft descending 190 feet, a tunnel extending 18,970 feet, a riser assembly ascending 160 feet, a seafloor outfall extending 4,670 feet, and a wye diffuser. From this wye diffuser, two diffuser legs will extend approximately 1,974 feet north and south and terminate at a depth of approximately 93 feet below sea level. The terminus of the diffuser will be located at Latitude 32° 32' 15" North and Longitude 117° 11' 00" West. The South Bay Ocean Outfall is designed for an average daily flowrate of 174 MGD with a peak hydraulic capacity of 333 MGD. A

portion of the South Bay Ocean Outfall design capacity is reserved for two planned City of San Diego treatment plants: Otay Water Reclamation Plant and South Bay Treatment Plant.

The IBWC reported, by letter dated August 16, 1996, that the minimum initial dilution of 100 was calculated using the computer models UMERGE and TRACKER and characteristics for the Preliminary 1990 Design of the South Bay Ocean Outfall diffuser system shown below. The UMERGE model is approved by the State Board for calculation of minimum initial dilution. The TRACKER model was used to assess the possible effects of re-entrainment of previously discharged effluent. Staff of the State Water Resources Control Board determined a minimum initial dilution of 110 using the computer model UMERGE and the characteristics for the Interim Discharge of the South Bay Ocean Outfall diffuser system shown below. To be conservative, the discharge specifications in this permit are calculated using the lower minimum initial dilution of 100 to 1.

	Preliminary Design 1990	**Final Design 1995**	**Interim Discharge**
Total Annual Average Flow (MGD)	232	174	25
Diffuser Length per each of two equal legs (feet)	2400	1980	816
Number of Ports	600	660	136
Average Port Diameter (inches)	3.0	2.5	2.625
Port Spacing	8	6	6
Orientation of Ports (degrees)	0	0	0
Average Port Depth (feet below Mean Sea Level)	-85	-92.75	-93.25

The report of waste discharge (including NPDES Permit Application Forms), dated May 24, 1996 contains the data used to prepare this permit and is representative of anticipated conditions at the IWTP.

Discharge Description

Treated wastewater that will be discharged through the SBOO will consist of treated sewage from domestic and industrial sources. According to the IWTP NPDES permit application, the treated wastewater discharged through the SBOO to the Pacific Ocean will have the following characteristics:

Parameter	Units	Annual Average
Biochemical Oxygen Demand (BOD_5)	mg/l	19
Total Suspended Solids	mg/l	21
grease and oil	mg/l	4

Receiving Water Description

Regionally, nutrient concentrations in seawater, both dissolved and particulate, are generally low. Uptake in the near-surface waters by phytoplankton further reduces the concentrations of inorganic nutrients. Upwelling of nutrients regenerated at depth provides a source for enhanced plankton production, as does wastewater discharge. The seasonal variations in dissolved oxygen concentrations which occur are consistent with the rest of the California bight.

The waters and beaches along this area of the coast provide various opportunities for water-related recreational activities which include sightseeing, sunbathing, swimming, surfing, diving, fishing, camping, picnicking, bird-watching, and boating. The beaches are used year-round with peak usage during the months of July and August.

A small kelp bed and extensive cobble beds and reefs exist to the north of the South Bay Ocean Outfall. The closest kelp bed is located approximately 2 miles north of the South Bay Ocean Outfall.

Basis for Waste Discharge Requirements

Section 402 of the Federal Clean Water Act gives the United States Environmental Protection Agency (USEPA) the authority to issue NPDES permits for discharges into navigable waters and to prescribe conditions for such permits necessary to carry out provisions of the Act. In California, USEPA has delegated this authority to the State of California Water Resources Control Board (SWRCB).

The State Water Resources Control Board (hereinafter SWRCB) adopted a revised Water Quality Control Plan for Ocean Waters of California (California Ocean Plan) on March 22, 1990. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:

a. Industrial water supply
b. Navigation
c. Water contact recreation
d. Non-contact water recreation
e. Ocean commercial and sport fishing
f. Preservation and enhancement of Areas of Special Biological Significance (ASBS)
g. Preservation of rare and endangered species
h. Marine habitat
i. Mariculture
j. Fish migration
k. Fish spawning
l. Shellfish harvesting
m. Aesthetic enjoyment

In order to protect these beneficial uses, the Ocean Plan establishes water quality objectives (for bacterial, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions.

The Water Quality Control Plan, San Diego Basin (9) (Basin Plan) was adopted by the Regional Board on September 8, 1994 and subsequently approved by the SWRCB on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the SWRCB. The Basin Plan designates beneficial uses and narrative and numerical water quality objectives, and prohibitions which are applicable to the discharges regulated under this Order.

The Basin Plan identifies the following beneficial uses of state ocean waters to be protected:

a. Industrial service supply
b. Navigation
c. Contact water recreation
d. Noncontact water recreation
e. Commercial and sport fishing

f. Preservation of biological habitats of special significance
g. Wildlife habitat
h. Rare, threatened, or endangered species
i. Marine habitat
j. Aquaculture
k. Migration of aquatic organisms
l. Spawning, reproduction, and/or early development
m. Shellfish harvesting

The Basin Plan relies primarily on the requirements of the Ocean Plan for protection of these beneficial uses. However, the Basin Plan establishes additional water quality objectives for dissolved oxygen and pH.

Proposed Effluent Limitations

Section 301(b)(1)(B) of the Clean Water Act (CWA) requires POTWs to meet effluent limitations based on secondary treatment as defined by the USEPA Administrator. Secondary treatment is defined by the USEPA Administrator in the federal regulations (40 CFR Part 133.100 to 40 CFR Part 133.105) in terms of three parameters: 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH. Federal regulations allow substitution of 5-day carbonaceous biochemical oxygen demand ($CBOD_5$) limitations for BOD_5 limitations. Discharge Specification B.2.a. of this Order establishes effluent limitations for $CBOD_5$, TSS and pH in accordance with federal secondary treatment regulations. In addition, Discharge Specification B.2.a. of this Order establishes "Maximum at Any Time" limitation for $CBOD_5$ and TSS based on best professional judgement. Mass emission rate (MER) limitations for $CBOD_5$ and TSS are based on a flowrate of 25.0 MGD.

The effluent concentration and mass emission rate limitations for Table B Ocean Plan substances listed in Discharge Specifications B.2 of tentative Order 96-50 were determined through use of the following equation:

$$Ce = Co + Dm (Co - Cs)$$
$$MER = 8.34 \times Ce \times Q$$

where:

Ce = the effluent concentration limit,
Co = the concentration to be met at the completion of initial dilution
Cs = background seawater concentration
Dm = minimum probable initial dilution
MER = mass emission rate in lb/day

Q = flowrate, MGD

The discharge specifications in this permit are calculated using the lower minimum initial dilution of 100.

Pretreatment and Sludge

Federal Regulations (40 CFR Part 403) establish pretreatment program requirements for POTWs which receive pollutants from industries subject to pretreatment standards. The IWTP receives sewage from eastern Tijuana in Mexico. Industries in Mexico are not subject to the pretreatment standards contained in 40 CFR Part 403. This order does not contain industrial pretreatment program requirements pursuant to 40 CFR Part 403.

On July 2, 1990, Mexico and the United States signed IBWC Treaty Minute No. 283 titled Conceptual Plan for the International Solution to the Border Sanitation Problem in San Diego, California/ Tijuana, Baja California. Minute No. 283 states "The Government of Mexico in accordance with laws in force in that country, in order to assure efficient treatment of Tijuana sewage in the international plant, will require all industries to provide appropriate pretreatment of wastewater that those industries may discharge into the Tijuana sewage collection system which would in turn discharge into the international sewage treatment plant." The IBWC, U.S. Section is negotiating with Mexico to initiate a pretreatment program, but due to many factors, a program similar to one implemented in the United States may not be appropriate in Mexico. The IBWC, U.S. Section, submitted a Proposed Source Control Program with the NPDES application. This Proposed Source Control Program does not satisfy the pretreatment requirements in 40 CFR Part 403. This order contains pretreatment requirements consistent with the Proposed Source Control Program.

Federal Regulations (40 CFR Part 503) established the final rule for the use and disposal of sewage sludge on February 19, 1993. This regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. USEPA, not this Regional Board, oversees compliance with 40 CFR Part 503. The sludge from the IWTP will be disposed of in Mexico. These Federal Regulations regarding sewage sludge are not applicable to sludge disposed of in Mexico.

Procedures for Final Decision

In accordance with 40 CFR Part 124.10, the Regional Board must issue a public notice that a draft NPDES permit has been prepared and that the draft permit will be brought before the Regional Board at a public hearing. The public notice must be issued as

least 30 days prior to the public hearing. The public notice for preparation of a draft permit and public notice for a public hearing may be given at the same time and the two notices may be combined.

Regional Board staff will conduct a Public Workshop on Tentative Order No. 96-50, (NPDES Permit No. CA 0108928) for the discharge from the IWTP and Tentative Cease and Desist Order No. 96-52. The Public Workshop will be held on September 18, 1996 at 10:00 a.m. in the Regional Board Conference Room. Any interested parties are welcome to attend this workshop.

A public hearing has been scheduled for October 10, 1996 at 10:30 a.m., at the following location:

City of Chula Vista
City Council Chambers
276 Fourth Avenue
Chula Vista, California.

Interested persons are invited to attend the public hearing and express their views on issues relating to the proposed permit and tentative cease and desist order. Oral statements will be heard, but for the accuracy of the record, all important testimony should be submitted in writing. Written testimony should be submitted to the Regional Board office as soon as possible and preferably no later than September 30, 1996, to the attention of Mrs. Kristin Schwall or Ms. Darcy Jones at the California Regional Water Quality Control Board, San Diego Region, 9771 Clairemont Mesa Blvd., Suite A, San Diego, CA 92124-1331. Written testimony may also be submitted at the public hearing. At the public hearing, oral testimony should be limited to brief summaries of written testimony. Please note that presentations will be limited to 15 minutes or less, unless otherwise determined by the Regional Board Chair. Following the public hearing, additional written comments may be submitted until the close of the public comment period on October 24, 1996. All comments received by the close of the public comment period will be considered by the Regional Board.

The Regional Board will consider adoption of Tentative Order No. 96-50 and Tentative Cease and Desist Order No. 96-52 at the November 14, 1996 Regional Board meeting.

Regional Board adoption of a final permit may be petitioned for review to the State Water Resources Control Board. Petitions for review to the State Water Resources Control Board must be filed in writing within thirty (30) days following the Regional Board's adoption of the final permit. Petitions for review of Regional Board action must be sent to the State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95812-0100

For further information regarding the NPDES application, draft NPDES permit, draft Cease and Desist Order, public workshop, or public hearing for the discharge of waste through the South Bay Ocean Outfall, contact Ms. Kristin Schwall or Ms. Darcy Jones in writing at the above address or by telephone at (619) 467-2960 and (619) 476-2981 respectively. Copies of the application, draft NPDES permit, and other documents are available at the Regional Board office for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday (excluding holidays).

TECHNICAL CHANGE ORDER T-1
FOR
MONITORING AND REPORTING PROGRAM NO. 96-50
FOR THE
SOUTH BAY INTERNATIONAL WASTEWATER TREATMENT PLANT
SAN DIEGO COUNTY

It is hereby ordered that the reporting due dates for the monthly monitoring reports and the sampling dates for weekly and monthly sampling are modified as follows:

A. MONITORING REPORT SCHEDULE

Monthly monitoring reports shall be submitted to the Regional Board Executive Officer in accordance with the following schedule:

Report	Report Period	Report Due
Monthly influent, effluent, sludge analysis, and receiving water, including all continuous, daily, weekly, and monthly monitoring results	January, February, March, April, May, June, July, August, September, October, November, December	By the 15th day of the second following month

B. WEEKLY AND MONTHLY SAMPLING DATES

In order to correspond with the current toxicity study sampling schedule, weekly and monthly sampling for all constituent analysis required by Order No. 96-50 shall occur at the same time toxicity sampling is conducted for the months of March, April, and May 1998. The total required weekly and monthly number of samples shall still be accomplished. If additional sampling is necessary in order to meet the required total number of weekly and monthly sampling, sampling shall be conducted in accordance with the schedule in Order No. 96-50. This revised sampling schedule shall be effective for the months of March, April, and May 1998 only.

Ordered by: 
JOHN H. ROBERTUS
Executive Officer

Dated: March 13, 1998

November 14, 1996

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. 96-50
NPDES NO. CA0108928

FOR THE
INTERNATIONAL BOUNDARY AND WATER COMMISSION
U.S. SECTION

INTERNATIONAL WASTEWATER TREATMENT PLANT
DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL
SAN DIEGO COUNTY

MRP No. 96-50 shall take effect upon the date of adoption by the California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board).

A. GENERAL MONITORING AND REPORTING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored waste stream. All samples shall be taken at the monitoring points specified in Order No. 96-50 or this MRP and, unless otherwise specified, before the waste stream joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall be subject to the approval of the Regional Board Executive Officer (hereinafter Executive Officer) and shall not be changed without notification to and the approval of the Executive Officer. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirements of Order No. 96-50.

2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device.

Devices selected shall be capable of measuring flows with a maximum deviation of less than ±5 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

a . "Guide to Methods and Standards for the Measurement of Water Flow," U. S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U. S. Government Printing Office, Washington, D. C. 20402. Order by SD Catalog No. C13.10:421.)

b. "Water Measurement Manual," U. S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U. S. Government Printing Office, Washington, D. C. 20402. Order by Catalog No. 127, 19/2:W29/2, Stock No. S/N 24003-0027.)

c. "Flow Measurement in Open Channels and Closed Conduits," U. S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy of microfiche from National Technical Information Service (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273-535/5ST.)

d. "NPDES Compliance Sampling Manual," U. S. Environmental Protection Agency, Office of Water Enforcement. Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225).

3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40 of the Code of Federal Regulations Part 136 (40 CFR 136), "Guidelines Establishing Test Procedures for the Analysis of Pollutants" as amended, unless otherwise specified for sludge in 40 CFR 503, and unless other test procedures have been specified in Order No. 96-50 and/or in this monitoring and reporting program.

4. Monitoring results must be reported on discharge monitoring report (DMR) forms approved by the Executive Officer.

5. If the discharger monitors any pollutant more frequently than required by Order No. 96-50 or this MRP, using test procedures approved under 40 CFR 136, or as specified in Order No. 96-50 or this MRP, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. The

increased frequency of monitoring shall also be reported.

6. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this MRP, Order No. 96-50, any enforcement order issued by the Regional Board, and records of all data used to complete the application for Order No. 96-50. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer. It is recommended that the discharger maintain the results of all analyses indefinitely.

7. Records of monitoring information shall include:

   a. The date, exact location, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The date(s) analyses were performed;

   d. The laboratory and individual(s) who performed the analyses;

   e. The analytical techniques or methods used; and

   f. The results of all such analyses.

8. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order No. 96-50 or in this MRP. The discharger shall report the analysis results, calculation results, data, and equations used in calculations.

9. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Officer a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required by General Monitoring and Reporting Provision A.2 of this MRP.

10. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services environmental laboratory accreditation program (ELAP), or a laboratory approved by the Executive Officer.

11. If only one measurement is made during the time period associated with a discharge specification, effluent limitation, or receiving water limit (e.g., 30-day average or 6-month median), that single measurement shall be used to determine compliance with the discharge specification, effluent limitation, or receiving water limitation for the entire time period.

12. The discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. An annual report shall be submitted by March 30 of each year which summarizes the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples or at least one sample per month, whichever is greater. The discharger must have a success rate equal to or greater than 80 percent. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA or the Regional Board, the discharger will participate in the National Pollutant Discharge Elimination System (NPDES) discharger monitoring report quality assurance (QA) performance study.

13. The discharger shall report all instances of noncompliance not reported under Standard Provision D.12 of Order No. 96-50 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision D.12 of Order No. 96-50.

14. The monitoring reports shall be signed by an authorized person as required by 40 CFR 122.44.

15. Laboratory method detection limits (MDLs) and practical quantitation levels (PQLs) shall be identified for each constituent in the matrix being analyzed with all reported analytical data. Acceptance of data shall be based on demonstrated laboratory performance.

16. A composite sample is defined as a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

17. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

18. For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000. The detection method used for each analysis shall be reported with the results of the analysis.

19. Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate. Detection methods used for enterococcus shall be those presented in Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure (EPA 600/4-85/076) or any improved method determined by the Executive Officer to be appropriate.

20. Revisions to this MRP may be made by the Executive Officer at any time, and may include a change in the location of sampling stations and/or a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, the number of sampling stations and/or the number and/or size of samples collected.

21. By June 30 of each year, the discharger shall submit an annual report to the Regional Board which contains tabular and graphical summaries of the monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharge into full compliance with the requirements of Order No. 96-50 and this MRP. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall include the date of the facilities' Operations and Maintenance Manual, the date the manual was last reviewed, and a statement as to whether the manual is complete and valid for the current facilities. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with Order No. 96-50 and this MRP, and provide a summary of performance relative to the requirements in this MRP.

22. The sampling frequency of "daily" means that samples shall be collected seven days per week. "Weekly" samples shall be collected such that each day of the week is represented during a seven week period.

23. Monitoring results shall be reported at intervals and in a manner specified in this MRP and Order No. 96-50. Monitoring reports shall be submitted to the Regional Board according to the following schedule:

Report	Report Period	Report Due
MONTHLY Influent, Effluent, Sludge Analysis, and Receiving Water, including all continuous, daily, weekly, and monthly monitoring results	January, February, March, April, May, June, July, August, September, October, November, December	By the 30th day of the following month (February 28 for January)
QUARTERLY Fish trawl reports.	January-March April-June July-September October-December	May 30 August 30 November 30 February 28
SEMIANNUAL Sediment and infauna reports, trawl fish bioaccumulation reports, rig fishing reports.	January-June July-December	August 30 March 1
ANNUAL Pretreatment Report (Pretreatment Requirement G.3 of Order No. 96-50), and sludge analysis (Sludge Requirement H.4 of Order No. 96-50)	January-December	March 30
ANNUAL Report described in General Monitoring and Reporting Provision No. A.21 of this MRP, QA, flow measurement report, and receiving water reports.	January-December	June 30

B. INFLUENT MONITORING

Influent monitoring is required to determine compliance with NPDES permit conditions and water quality standards, to determine the effectiveness of pretreatment and nonindustrial source control programs, to assess the performance of the treatment plant, and to evaluate compliance with effluent limitations (eg., percent removal). The influent sampling station shall be located where representative samples of the influent can be obtained. The sampling station shall be located upstream of any in-plant return flows, recycle flows, or the addition of treatment chemicals. Influent samples shall be collected on the same day as, and shortly before the collection of effluent samples.

During periods when no effluent is discharged from the IWTP, no influent monitoring, except for flowrate monitoring, is required.

Influent monitoring shall be conducted as shown in the following table:

INFLUENT SAMPLING AND ANALYSIS REQUIREMENTS

Parameter	Units	Sample Type	Sample/ Analyses Frequency	Report Frequency
flowrate	MGD	record/totalizer	continuous	monthly
$CBOD_5$@20^0C	mg/l	24 hr. composite	weekly	monthly
volatile suspended solids	mg/l	24 hr. composite	weekly	monthly
total dissolved solids	mg/l	24 hr. composite	weekly	monthly
temperature	^0C	grab	weekly	monthly
floating particulates	mg/l	24 hr. composite	weekly	monthly
grease & oil	mg/l	grab	weekly	monthly
total suspended solids	mg/l	24 hr. composite	weekly	monthly
settleable solids	ml/l	grab	weekly	monthly
turbidity	NTU	24 hr. composite	weekly	monthly
pH	units	grab	weekly	monthly
arsenic	ug/l	24 hr. composite	weekly	monthly
cadmium	ug/l	24 hr. composite	weekly	monthly
chromium (VI)	ug/l	24 hr. composite	weekly	monthly
copper	ug/l	24 hr. composite	weekly	monthly
lead	ug/l	24 hr. composite	weekly	monthly

mercury	ug/l	24 hr. composite	weekly	monthly
nickel	ug/l	24 hr. composite	weekly	monthly
selenium	ug/l	24 hr. composite	weekly	monthly
silver	ug/l	24 hr. composite	weekly	monthly
zinc	ug/l	24 hr. composite	weekly	monthly
cyanide	ug/l	24 hr. composite	weekly	monthly
ammonia (as N)	mg/l	24 hr. composite	weekly	monthly
phenolic compounds (nonchlorinated)	ug/l	24 hr. composite	weekly	monthly
phenolic compounds (chlorinated)	ug/l	24 hr. composite	weekly	monthly
endosulfan	ug/l	24 hr. composite	weekly	monthly
endrin	ug/l	24 hr. composite	weekly	monthly
HCH	ug/l	24 hr. composite	weekly	monthly
radioactivity	pCi/l	24 hr. composite	monthly	monthly
acrolein	ug/l	24 hr. composite	monthly	monthly
antimony	ug/l	24 hr. composite	monthly	monthly
bis(2-chloroethoxy) methane	ug/l	grab	monthly	monthly
bis(2-chloroisopropyl) ether	ug/l	grab	monthly	monthly
chlorobenzene	ug/l	grab	monthly	monthly
chromium (III)	ug/l	24 hr. composite	monthly	monthly
di-n-butyl phthalate	ug/l	24 hr. composite	monthly	monthly
dichlorobenzenes	ug/l	24 hr composite	monthly	monthly
1,1-dichloroethylene	ug/l	grab	monthly	monthly
diethyl phthalate	ug/l	24 hr. composite	monthly	monthly
dimethyl phthalate	ug/l	24 hr. composite	monthly	monthly
4,6-dinitro-2-methylphenol	ug/l	24 hr. composite	monthly	monthly
2,4-dinitrophenol	ug/l	24 hr. composite	monthly	monthly
ethylbenzene	ug/l	grab	monthly	monthly
fluoranthene	ug/l	24 hr. composite	monthly	monthly
hexachlorocyclo-pentadiene	ug/l	24 hr. composite	monthly	monthly
isophorone	ug/l	24 hr. composite	monthly	monthly
nitrobenzene	ug/l	24 hr. composite	monthly	monthly
thallium	ug/l	24 hr. composite	monthly	monthly
toluene	ug/l	grab	monthly	monthly
1,1,2,2-	ug/l	grab	monthly	monthly

tetrachloroethane				
tributyltin	ug/l	24 hr. composite	monthly	monthly
1,1,1-trichloroethane	ug/l	grab	monthly	monthly
1,1,2-trichloroethane	ug/l	grab	monthly	monthly
acrylonitrile	ug/l	24 hr. composite	monthly	monthly
aldrin	ug/l	24 hr. composite	weekly	monthly
benzene	ug/l	grab	monthly	monthly
benzidine	ug/l	24 hr composite	monthly	monthly
beryllium	ug/l	24 hr. composite	monthly	monthly
bis(2-chloroethyl) ether	ug/l	24 hr. composite	monthly	monthly
bis(2-ethylhexyl) phthalate	ug/l	24 hr. composite	monthly	monthly
carbon tetrachloride	ug/l	grab	monthly	monthly
chlordane	ug/l	24 hr. composite	weekly	monthly
chloroform	ug/l	grab	monthly	monthly
DDT	ug/l	24 hr. composite	weekly	monthly
1,4-dichlorobenzene	ug/l	24 hr. composite	monthly	monthly
3,3-dichlorobenzidine	ug/l	24 hr. composite	monthly	monthly
1,2-dichloroethane	ug/l	grab	monthly	monthly
dichloromethane	ug/l	grab	monthly	monthly
1,3-dichloropropene	ug/l	24 hr. composite	monthly	monthly
dieldrin	ug/l	24 hr. composite	weekly	monthly
2,4-dinitrotoluene	ug/l	24 hr. composite	monthly	monthly
1,2-diphenylhydrazine	ug/l	24 hr. composite	monthly	monthly
halomethanes	ug/l	24 hr. composite	monthly	monthly
heptachlor	ug/l	24 hr. composite	monthly	monthly
hexachlorobenzene	ug/l	24 hr. composite	monthly	monthly
hexachlorobutadiene	ug/l	24 hr. composite	monthly	monthly
hexachloroethane	ug/l	24 hr. composite	monthly	monthly
N-nitrosodimethylamine	ug/l	24 hr. composite	monthly	monthly
N-nitrosdiphenylamine	ug/l	24 hr. composite	monthly	monthly
PAHs	ug/l	24 hr. composite	monthly	monthly
PCBs	ug/l	24 hr. composite	weekly	monthly
TCDD equivalents	ug/l	24 hr. composite	monthly	monthly
tetrachloroethylene	ug/l	grab	monthly	monthly
toxaphene	ug/l	24 hr. composite	weekly	monthly
trichloroethylene	ug/l	grab	monthly	monthly
2,4,6-trichlorophenol	ug/l	24 hr. composite	monthly	monthly
vinyl chloride	ug/l	grab	monthly	monthly

remaining "priority pollutants"	ug/l	24 hr. composite	monthly	monthly

C. SLUDGE MONITORING REQUIREMENTS

1. General sludge monitoring and reporting requirements are contained in Sludge Requirements Section H of Order No. 96-50.

D. EFFLUENT MONITORING

Effluent monitoring is required to determine compliance with NPDES permit conditions and water quality standards, to identify operational problems in order to improve plant performance, and to provide information on waste characteristics and flows for use in interpreting water quality and biological data.

The effluent sampling station shall be located where representative samples of the effluent discharged through the ocean outfall can be obtained. The sampling station shall be located downstream from any in-plant return flows, disinfection units, and from the last connection through which wastes can be admitted to the outfall.

During periods when no effluent is discharged from the IWTP, no effluent monitoring, except for flowrate monitoring, is required .

Effluent monitoring shall be conducted as shown in the following table:

EFFLUENT SAMPLING AND ANALYSIS REQUIREMENTS

Parameter	Units[a]	Sample Type	Sample/ Analyses Frequency	Report Frequency
flowrate	MGD	record/totalizer	continuous	monthly
$CBOD_5$@20^0C[b]	mg/l	24 hr. composite	daily	monthly
total BOD_5 @20^0C	mg/l	24 hr. composite	daily	monthly
total soluble BOD_5 @20^0C	mg/l	24 hr. composite	daily	monthly
volatile suspended solids	mg/l	24 hr. composite	daily	monthly
total dissolved solids	mg/l	24 hr. composite	daily	monthly
temperature	^0C	grab	daily	monthly
floating particulates	mg/l	24 hr. composite	daily	monthly

grease & oil	mg/l	grab	daily	monthly
total suspended solids[b]	mg/l	24 hr. composite	daily	monthly
settleable solids	ml/l	grab	daily	monthly
turbidity	NTU	24 hr. composite	daily	monthly
pH	units	grab	daily	monthly
acute toxicity[c]	TUa	24 hr. composite	weekly	monthly
arsenic	ug/l	24 hr. composite	weekly	monthly
cadmium	ug/l	24 hr. composite	weekly	monthly
chromium (VI)[d]	ug/l	24 hr. composite	weekly	monthly
copper	ug/l	24 hr. composite	weekly	monthly
lead	ug/l	24 hr. composite	weekly	monthly
mercury	ug/l	24 hr. composite	weekly	monthly
nickel	ug/l	24 hr. composite	weekly	monthly
selenium	ug/l	24 hr. composite	weekly	monthly
silver	ug/l	24 hr. composite	weekly	monthly
zinc	ug/l	24 hr. composite	weekly	monthly
cyanide	ug/l	24 hr. composite	weekly	monthly
ammonia (as N)	mg/l	24 hr. composite	weekly	monthly
chronic toxicity[e]	TUc	24 hr. composite	weekly	monthly
phenolic compounds (nonchlorinated)	ug/l	24 hr. composite	weekly	monthly
phenolic compounds (chlorinated)	ug/l	24 hr. composite	weekly	monthly
endosulfan	ug/l	24 hr. composite	weekly	monthly
endrin	ug/l	24 hr. composite	weekly	monthly
HCH	ug/l	24 hr. composite	weekly	monthly
radioactivity	pci/l	24 hr. composite	monthly	monthly
acrolein	ug/l	24 hr. composite	monthly	monthly
antimony	ug/l	24 hr. composite	monthly	monthly
bis(2-chloroethoxy) methane	ug/l	grab	monthly	monthly
bis(2-chloroisopropyl) ether	ug/l	grab	monthly	monthly
chlorobenzene	ug/l	grab	monthly	monthly
chromium (III)	ug/l	24 hr. composite	monthly	monthly
di-n-butyl phthalate	ug/l	24 hr. composite	monthly	monthly
dichlorobenzenes	ug/l	24 hr composite	monthly	monthly
1,1-dichloroethylene	ug/l	grab	monthly	monthly

diethyl phthalate	ug/l	24 hr. composite	monthly	monthly
dimethyl phthalate	ug/l	24 hr. composite	monthly	monthly
4,6-dinitro-2-methylphenol	ug/l	24 hr. composite	monthly	monthly
2,4-dinitrophenol	ug/l	24 hr. composite	monthly	monthly
ethylbenzene	ug/l	grab	monthly	monthly
fluoranthene	ug/l	24 hr. composite	monthly	monthly
hexachlorocyclo-pentadiene	ug/l	24 hr. composite	monthly	monthly
isophorone	ug/l	24 hr. composite	monthly	monthly
nitrobenzene	ug/l	24 hr. composite	monthly	monthly
thallium	ug/l	24 hr. composite	monthly	monthly
toluene	ug/l	grab	monthly	monthly
1,1,2,2-tetrachloroethane	ug/l	grab	monthly	monthly
tributyltin	ug/l	24 hr. composite	monthly	monthly
1,1,1-trichloroethane	ug/l	grab	monthly	monthly
1,1,2-trichloroethane	ug/l	grab	monthly	monthly
acrylonitrile	ug/l	24 hr. composite	monthly	monthly
aldrin	ug/l	24 hr. composite	weekly	monthly
benzene	ug/l	grab	monthly	monthly
benzidine	ug/l	24 hr composite	monthly	monthly
beryllium	ug/l	24 hr. composite	monthly	monthly
bis(2-chloroethyl) ether	ug/l	24 hr. composite	monthly	monthly
bis(2-ethylhexyl) phthalate	ug/l	24 hr. composite	monthly	monthly
carbon tetrachloride	ug/l	grab	monthly	monthly
chlordane	ug/l	24 hr. composite	weekly	monthly
chloroform	ug/l	grab	monthly	monthly
DDT	ug/l	24 hr. composite	weekly	monthly
1,4-dichlorobenzene	ug/l	24 hr. composite	monthly	monthly
3,3-dichlorobenzidine	ug/l	24 hr. composite	monthly	monthly
1,2-dichloroethane	ug/l	grab	monthly	monthly
dichloromethane	ug/l	grab	monthly	monthly
1,3-dichloropropene	ug/l	24 hr. composite	monthly	monthly
dieldrin	ug/l	24 hr. composite	weekly	monthly
2,4-dinitrotoluene	ug/l	24 hr. composite	monthly	monthly
1,2-diphenylhydrazine	ug/l	24 hr. composite	monthly	monthly
halomethanes	ug/l	24 hr. composite	monthly	monthly
heptachlor	ug/l	24 hr. composite	monthly	monthly
hexachlorobenzene	ug/l	24 hr. composite	monthly	monthly

hexachlorobutadiene	ug/l	24 hr. composite	monthly	monthly
hexachloroethane	ug/l	24 hr. composite	monthly	monthly
N-nitrosodimethylamine	ug/l	24 hr. composite	monthly	monthly
N-nitrosdiphenylamine	ug/l	24 hr. composite	monthly	monthly
PAHs	ug/l	24 hr. composite	monthly	monthly
PCBs	ug/l	24 hr. composite	weekly	monthly
TCDD equivalents	ug/l	24 hr. composite	monthly	monthly
tetrachloroethylene	ug/l	grab	monthly	monthly
toxaphene	ug/l	24 hr. composite	weekly	monthly
trichloroethylene	ug/l	grab	monthly	monthly
2,4,6-trichlorophenol	ug/l	24 hr. composite	monthly	monthly
vinyl chloride	ug/l	grab	monthly	monthly
remaining "priority pollutants"	ug/l	24 hr. composite	monthly	monthly

a. The discharger shall report the Mass Emission Rate (MER) in lb/day for all constituents that have MER effluent limitations established by Discharge Specification B.1 of Order No. 96-50. The discharger shall also report the concentration and flowrate used to calculate the MER for each constituent.

b. For determining compliance with Ocean Plan requirements, percent carbonaceous biochemical oxygen demand (5-day) ($CBOD_5$) and percent total suspended solids (TSS) removal (i.e., $CBOD_5$ and TSS removal efficiency) shall be calculated as follows:

Percent Removal $CBOD_5$ = 100% x [($CBOD_{5inf}$-$CBOD_{5eff}$)/$CBOD_{5inf}$]

Where: $CBOD_{5inf}$ = carbonaceous biochemical oxygen demand (5-day) in raw wastewater unaffected by in-plant or return or recycle flows or the addition of treatment chemicals. $CBOD_{5\ inf}$ shall be determined in accordance with the requirements of Section B, Influent Monitoring.

$CBOD_{5eff}$ = carbonaceous biochemical oxygen demand (5-day) in the effluent

$CBOD_{5inf}$ and $CBOD_{5eff}$ shall be determined on the basis of both concentration (mg/l) and mass (lb/day). The 30-day average percent total suspended solids removal shall be calculated daily, on both a concentration and a mass basis, using the 30-day average values of $CBOD_{5inf}$ and $CBOD_{5eff}$. The results shall be reported monthly.

Percent Removal TSS = 100% x [(TSS_{inf}-TSS_{eff})/TSS_{inf}]

Where: TSS_{inf} = total suspended solids in raw wastewater unaffected by in-plant or return or recycle flows or the addition of treatment chemicals. TSS_{inf} shall be determined in accordance with the requirements of Section B, Influent Monitoring.

TSS_{eff} = total suspended solids in the effluent

TSS_{inf} and TSS_{eff} shall be determined on the basis of both concentration (mg/l) and mass (lb/day). The 30-day average percent total suspended solids removal shall be calculated daily, on both a concentration and a mass basis, using the 30-day average values of TSS_{inf} and TSS_{eff}. The results shall be reported monthly.

c. Acute Toxicity Monitoring

Compliance with the acute toxicity effluent limitation in Discharge Specification B.1.a(2) shall be determined according to Compliance Determination F.12 of Order No. 96-50.

d. The discharger may, at its option, meet the effluent limitation and effluent mass emission rate for chromium (VI) as a total chromium limitation.

e. Chronic Toxicity Monitoring

Compliance with the chronic toxicity effluent limitation in Discharge Specification B.1.b shall be determined according to Compliance Determination F.13 of Order No. 96-50.

E. RECEIVING ENVIRONMENT MONITORING

To determine compliance with water quality standards, the receiving water quality monitoring program must document conditions in the vicinity of the "Zone of Initial Dilution" (ZID) boundary, at reference stations, and at areas beyond the ZID where discharge impacts might be reasonably expected. Monitoring must reflect conditions during all critical environmental periods. Receiving environment monitoring shall be conducted as specified below.

Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of this MRP shall include, as a minimum, the following information:

- A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).
- A description of sampling stations, including differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.).
- A description of the sample collection and preservation procedures used in the survey.
- A description of the specific method used for laboratory analysis.
- An in-depth discussion of the results of the survey. All tabulations and computations

shall be explained.

1. Sampling Stations

a. Offshore Water Quality Stations. Offshore stations shall be located and numbered as follows:

IWTP WATER QUALITY & BENTHIC STATIONS

STATIONS	LATITUDE	LONGITUDE	DEPTH (ft)
I1	32 28.400	117 16.600	197
I2	32 28.400	117 11.930	107
I3	32 28.020	117 10.050	88
I4	32 28.300	117 08.410	60
I5	32 28.300	117 07.780	45
I6	32 29.610	117 09.800	87
I7	32 31.000	117 15.200	170
I8	32 31.000	117 12.120	118
I9	32 30.700	117 10.720	95
I10	32 31.000	117 09.330	63
I11	32 30.800	117 08.200	44
I12	32 31.970	117 11.000	93
I13	32 32.250	117 12.720	124
I14	32 32.580	117 11.020	91
I15	32 32.270	117 11.350	102
I16	32 32.270	117 11.000	92
I17	32 32.270	117 10.680	84
I18	32 32.170	117 09.670	63
I19	32 32.180	117 07.730	33
I20	32 33.420	117 15.420	183
I21	32 33.640	117 13.610	135
I22	32 33.200	117 11.080	93
I23	32 33.050	117 09.900	68
I24	32 33.400	117 08.730	35
I25	32 33.670	117 08.870	31
I26	32 34.470	117 08.800	31
I27	32 34.450	117 11.450	92
I28	32 35.630	117 15.870	183
I29	32 35.670	117 13.380	124
I30	32 35.720	117 11.830	92
I31	32 35.730	117 10.330	63
I32	32 35.680	117 08.270	33

I33	32 37.440	117 14.230	98
I34	32 37.800	117 12.930	62
I35	32 38.200	117 10.920	63
I36	32 38.350	117 09.220	37
I37	32 38.880	117 12.980	41
I38	32 40.130	117 11.200	37
I39	32 34.340	117 10.050	60
I40	32 33.230	117 08.170	32

IWTP TRAWL STATIONS

STATIONS	LATITUDE	LONGITUDE	DEPTH (ft)
SD-15	32 28.350	117 10.500	90
SD-16	32 31.000	117 10.720	90
SD-17	32 32.200	117 11.430	100
SD-18	32 32.580	117 11.350	100
SD-19	32 33.500	117 11.080	94
SD-20	32 34.680	117 11.450	96
SD-21	32 36.990	117 12.690	95

IWTP RIG FISHING STATIONS

STATIONS	LATITUDE	LONGITUDE	DEPTH (ft)
RF-1	32 28.350	117 10.100	90
RF-2	32 32.270	117 11.000	90

IWTP SHORE STATION LOCATIONS

STATIONS	LOCATION	DESCRIPTION
S-1	Mexico (Punta Bandera Area)	Beach at Punta Bandera, near the middle of the Point
S-2	Mexico (El Vigia Area)	Beach south of El Vigia Restaurant.
S-3	Mexico (Fraccionamiento Playes de Tijuana Area)	Beach at end of existing road of Playes de Tijuana.
S-4	United States (Border Area)	Beach just north and nearly adjacent to the Boarder Fence.

S-5	United States (Tijuana Estuary)	Beach at north point of estuary mouth.
S-6	United States (Imperial Beach)	Beach at end of Seacoast Drive.
S-8	United States (Silver Strand)	Silver Strand State Beach, Area 4, just west of the Coronado Cays.
S-9	United States (Coronado)	Beach at the end of Avenida Del Sol seaward of Hotel Del Coronado.
S-10	United States (Monument Road)	Beach at the terminus of Monument Road.
S-11	United States (North of Tijuana River)	Beach approximately 3/4 mile north of the Tijuana River Mouth
S-12	United States (Imperial Beach)	Beach at the end of Carnation Street.

2. Receiving Water Sampling and Analyses Requirements

Receiving water monitoring shall be conducted as shown in the following table:

Parameter	Units	Stations	Sample Type	Sampling Frequency	Reporting Frequency
visual observation	--	all stations	visual	monthly	monthly
total coliforms, fecal coliforms, enterococcus	CFU/ 100ml	S-1 - S-9/ I3, I5, I7-I14, I16, I18 - I24, I30, I32, I33, I36- I38, I40	grab	weekly/ monthly	monthly
total coliforms, fecal coliforms, enterococcus	CFU/ 100ml	I25, I26, I39	grab	five times per month (rotating the day of the week sampled each week so that each day of the week is represented in a two month period)	monthly
temperature	◦C	I1 - I40	profile	monthly	monthly
pH	units	I1 - I40	profile	monthly	monthly
salinity	ppt	I1 - I40	profile	monthly	monthly
dissolved oxygen	mg/l	I1 - I40	profile	monthly	monthly
transmissivity		I1 - I40	profile	monthly	monthly
oil and grease	mg/l	I3, I5, I7-I14, I16, I18-I26, I30, I32, I33, I36- I40	grab	monthly	monthly
total suspended solids	mg/l	I3, I5, I7-I14, I16, I18-I26, I30, I32, I33, I36- I40	grab	monthly	monthly
kelp	--	--	aerial photos	annually	annually

a. Visual observations of the surface water conditions at the designated receiving water

stations shall be conducted in such a manner to enable the observer to describe and to report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (e.g., cloudy, sunny, or rainy), current (e.g., direction), and tidal conditions (e.g., high or low tide) shall be recorded. Observations of water color, discoloration, oil and grease, turbidity, odor, materials of sewage origin in the water or on the beach shall be recorded. These observations shall be taken whenever a sample is collected (generally monthly). Observations at shoreline stations (S-1 - S-9), will occur on a more frequent basis (weekly or every two weeks) corresponding with the increased frequency of shoreline bacterial monitoring during certain times of the year (see c. below).

b. Total suspended solids shall be measured monthly at three depths (sub-surface, mid-depth and bottom). Oil and grease shall be measured monthly in surface waters (top five feet). Temperature, salinity, dissolved oxygen, light transmittance and pH shall be measured monthly throughout the entire water column using probes (e.g., XBTs, CTDs) or meters (e.g., DO, pH). Suspended solids, and light transmittance measurements shall be taken on the same day and as close together in time as possible.

c. Total coliforms, fecal coliforms and enterococcus shall be sampled at nine shore stations (S-1 - S-9) according to the following schedule: weekly from May 1 through October 31, and every two weeks from November 1 through April 30.

Total coliforms, fecal coliforms and enterococcus shall be sampled at three kelp bed stations (I25, I26, and I39) and shall be monitored at least five times per month, such that each day of the week is represented over a two month period. Samples shall be collected from three depths (sub-surface, mid-depth and bottom).

Total coliforms, fecal coliforms and enterococcus shall be measured at least monthly at 25 offshore stations from three depths (sub-surface, mid-depth and bottom).

d. The areal extent of the Point Loma and Imperial Beach kelp beds shall be determined by aerial photography. The discharger shall participate with other ocean dischargers in the San Diego Region in an annual regional kelp bed photographic survey. Kelp beds shall be monitored annually by means of vertical aerial infrared photography to determine the maximum areal extent of the Region's coastal kelp beds within the calendar year. Surveys shall be conducted as close as possible to the time when kelp bed canopies cover the greatest area. The entire San Diego coastline, from the International Boundary to the San Diego Region/Santa Ana Region boundary. The images produced by the surveys shall be presented in the form of a 1:24,000 scale photo-mosaic of the entire San Diego Region coastline. Onshore reference points, locations of all ocean outfalls and diffusers, and the 30-foot (MLLW) and the 60-foot (MLLW) depth contours shall be shown. The areal extent of the Imperial Beach kelp beds photographed in each survey shall be

compared to that noted in surveys of previous years. Any significant losses which persist for more than one year shall be investigated by divers to determine the probable reason for the loss.

3. Benthic Monitoring Requirements

a. Sediment Sampling and Analyses Requirements. Sediment samples shall be collected semiannually from 27 stations (I1-I4, I6-I10, I12-I16, I18, I20-I23, I27-I31, I33-I35) using a 0.1-m^2 modified Van Veen grab sampler. Sediment samples for chemical analyses shall be taken from the top 2 cm of the grab. These samples shall be analyzed for the set of constituents as listed below. For sediment chemistry ambient monitoring may be conducted using USEPA approved or methods developed by NOAA's National Status and Trends Program for Marine Environmental Quality. For chemical analysis of sediment, samples shall be reported on a dry weight basis.

Parameter	*Units*	*Sample type*	*Frequency*
Sediment grain size	phi	grab	quarterly
Total Organic Carbon	%	grab	quarterly
Total Nitrogen	%	grab	quarterly
Acid volatile sulfides	mg/kg	grab	quarterly
Metals			
Aluminum	mg/kg	grab	quarterly
Antimony	mg/kg	grab	quarterly
Arsenic	mg/kg	grab	quarterly
Cadmium	mg/kg	grab	quarterly
Chromium	mg/kg	grab	quarterly
Copper	mg/kg	grab	quarterly
Iron	mg/kg	grab	quarterly
Lead	mg/kg	grab	quarterly
Manganese	mg/kg	grab	quarterly
Mercury	mg/kg	grab	quarterly
Nickel	mg/kg	grab	quarterly
Selenium	mg/kg	grab	quarterly
Silver	mg/kg	grab	quarterly
Tin	mg/kg	grab	quarterly
Zinc	mg/kg	grab	quarterly

PCBs and Chlorinated Pesticides				
PCBs[1]	ng/kg	grab	quarterly	
2,4'-DDD	ng/kg	grab	quarterly	
4,4'-DDD	ng/kg	grab	quarterly	
2,4'-DDE	ng/kg	grab	quarterly	
4,4'-DDE	ng/kg	grab	quarterly	
2,4'-DDT	ng/kg	grab	quarterly	
4,4'-DDT	ng/kg	grab	quarterly	
Aldrin	ng/kg	grab	quarterly	
alpha-Chlordane	ng/kg	grab	quarterly	
Dieldrin	ng/kg	grab	quarterly	
Endosulfan	ng/kg	grab	quarterly	
Endrin	ng/kg	grab	quarterly	
gamma-BHC	ng/kg	grab	quarterly	
Heptachlor	ng/kg	grab	quarterly	
Heptachlor epoxide	ng/kg	grab	quarterly	
Hexachlorobenzene	ng/kg	grab	quarterly	
Mirex	ng/kg	grab	quarterly	
Trans-nonachlor	ng/kg	grab	quarterly	
Polycyclic Aromatic Hydrocarbons				
Acenapthene	ug/kg	grab	quarterly	
Acenaphthylene	ug/kg	grab	quarterly	
Anthracene	ug/kg	grab	quarterly	
Benz(a)anthracene	ug/kg	grab	quarterly	
Benzo(o)fluoranthene	ug/kg	grab	quarterly	
Benzo(k)fluoranthene	ug/kg	grab	quarterly	
Benzo(ghi)pyrelene	ug/kg	grab	quarterly	
Benzo(a)pyrene	ug/kg	grab	quarterly	
Benzo(e)pyrene	ug/kg	grab	quarterly	
Biphenyl	ug/kg	grab	quarterly	
Chrysene	ug/kg	grab	quarterly	
Dibenz(ah)anthracene	ug/kg	grab	quarterly	
Fluoranthene	ug/kg	grab	quarterly	
Fluorene	ug/kg	grab	quarterly	
Indeno(123cd)pyrene	ug/kg	grab	quarterly	
Naphthalene	ug/kg	grab	quarterly	
1-Methylnaphthalene	ug/kg	grab	quarterly	
2-Methylnaphthalene	ug/kg	grab	quarterly	
2,6-Dimethylnaphthalene	ug/kg	grab	quarterly	
2,3,5-Trimethylnaphthalene	ug/kg	grab	quarterly	

[1] PCBs shall be reported as congeners.

Perylene	ug/kg	grab	quarterly
Phenanthrene	ug/kg	grab	quarterly
1-Methylphenanthrene	ug/kg	grab	quarterly
Pyrene	ug/kg	grab	quarterly

b. Infauna Monitoring. For analyses of benthic infauna, two replicate samples of bottom sediments shall be collected and analyzed semiannually from the following 27 stations: (I1-I4, I6-I10, I12-I16, I18, I20-I23, I27-I31, I33-I35).

The benthic infaunal samples shall be collected using a 0.1-m^2 modified Van Veen grab. These sample grabs shall be separate from those collected for sediment analyses. The samples shall be sieved using a 1.0-mm mesh screen. The benthic organisms retained on the sieve shall be fixed in fifteen percent buffered formalin, and transferred to 70 percent ethanol within two to seven days for storage. These organisms may be stained using Rose Bengal to facilitate sorting. All organisms, including infauna organisms, obtained during benthic monitoring shall be counted and identified to as low a taxon as possible. Biomass shall be estimated from wet weight measurements for each of the following taxa: molluscs, echinoderms, polychaetes, crustaceans and other taxa.

Community analyses shall consist of number of species, number of individuals per species and total numerical abundance, and biomass. Semiannual reports shall consist of the raw data (number of individuals per species) along with analysis of community parameters. Community parameters shall be summarized per station as:

Number of species per 0.1 m^2
Total number of species per station
Total numerical abundance
Biomass
Infaunal trophic index
Swartz' 75% dominance index
Shannon-Weiner's diversity index (H')
Pielou evenness (J')

Annual reports will include community parameters along with more detailed statistical comparisons including community, temporal, and spatial analyses. Methods may include, but are not limited to, various multivariate analyses such as cluster analysis, ordination, and regression. The discharger should also conduct additional analyses, as appropriate, to elucidate temporal and spatial trends in the data.

c. Random sampling An additional array of 40 randomly selected stations shall

be sampled and analyzed annually for sediment chemistry and benthic infauna, following the procedures outlined in Benthic Monitoring Requirements E.3.a and E.3.b. The stations shall be reselected each year by USEPA using the USEPA probability-based EMAP design. The area shall extend from the mouth of the San Dieguito River south to the Mexican border. Results shall be included in the annual receiving water report.

4. Fish Monitoring Requirements

a. Fish trawls. Fish trawls shall be conducted quarterly to assess the community structure of demersal fish and macro-invertebrates and the presence of priority pollutants in fish. Single trawls for demersal fish and macro-invertebrates shall be conducted quarterly at seven trawl stations (SD15 - SD21). Trawls shall be conducted using a Marinovich 7.62 m (25 ft) head rope otter trawl, using the guidance specified in the field manual developed for the Southern California Bight Pilot Project. Organisms captured at each trawl station shall be identified.

Fish collected by trawls should be identified to species. At all station, community structure analysis should be conducted. Community structure analysis consists of the wet weight of each species, number of individuals per species, total numerical abundance, species richness, species diversity (i.e., Shannon-Wiener), multivariate pattern analyses (e.g., ordination and classification analyses). Abnormalities and disease symptoms shall be recorded and itemized (e.g., fin erosion, internal and external lesions, tumors).

Chemical analyses of fish tissue shall be performed semiannually on selected target species from seven trawl stations (SD15 - SD21). The list of constituents shall be the same as for sediments with the exception that total lipids will be measured instead of organic carbon, nitrogen and grain size. The species targeted for analysis will be selected for their ecological or commercial importance and abundance at each sampling location. Three replicate composite samples shall be prepared from each trawl station for liver tissue. Each composite sample shall consist of tissues taken from at least three fish of the same species.

The species targeted for analysis at the trawl stations shall be primarily flatfish. The targeted species include but are not limited to the following: Pacific sanddab (Citharichthys sordidus), longfin sanddab (Citharichthys xanthostigma), speckled sanddab (Citharichthys stigmaeus), bigmouth sole (Hippoglossina stomata), or hornyhead turbot (Pleuronichthys verticalis). The California scorpionfish (Scorpaena guttata) and the halfbanded rockfish (Sebastes semicinctus) shall be targeted at sites that do not contain sufficient

b. Rig fishing. Rig fishing shall be performed semiannually to monitor the uptake of pollutants in fish which are consumed by man in order to determine the impact on public health, and to assess the impacts on local fish populations. Twice each year, fish shall be collected by hook and line or by setting baited lines from within the zone of initial dilution (ZID) and at some point removed from the ZID. The fish shall be representative of those caught by recreational and commercial fishermen in the area. Fish samples shall be identified as to species, number of individuals per species, standard length and wet weight. Physical abnormalities and disease symptoms shall be recorded and itemized (e.g., fin rot, internal and external lesions, and tumors).

Three replicate composite samples of the target species shall be obtained from each station. Each composite shall consist of a minimum of three individuals. Muscle tissue shall be chemically analyzed for the same set of constituents as trawl-caught fish.

I John H. Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of Monitoring and Reporting Program No. 96-50 adopted by the California Regional Water Quality Control Board, San Diego Region, on November 14, 1996.

John H. Robertus
Executive Officer